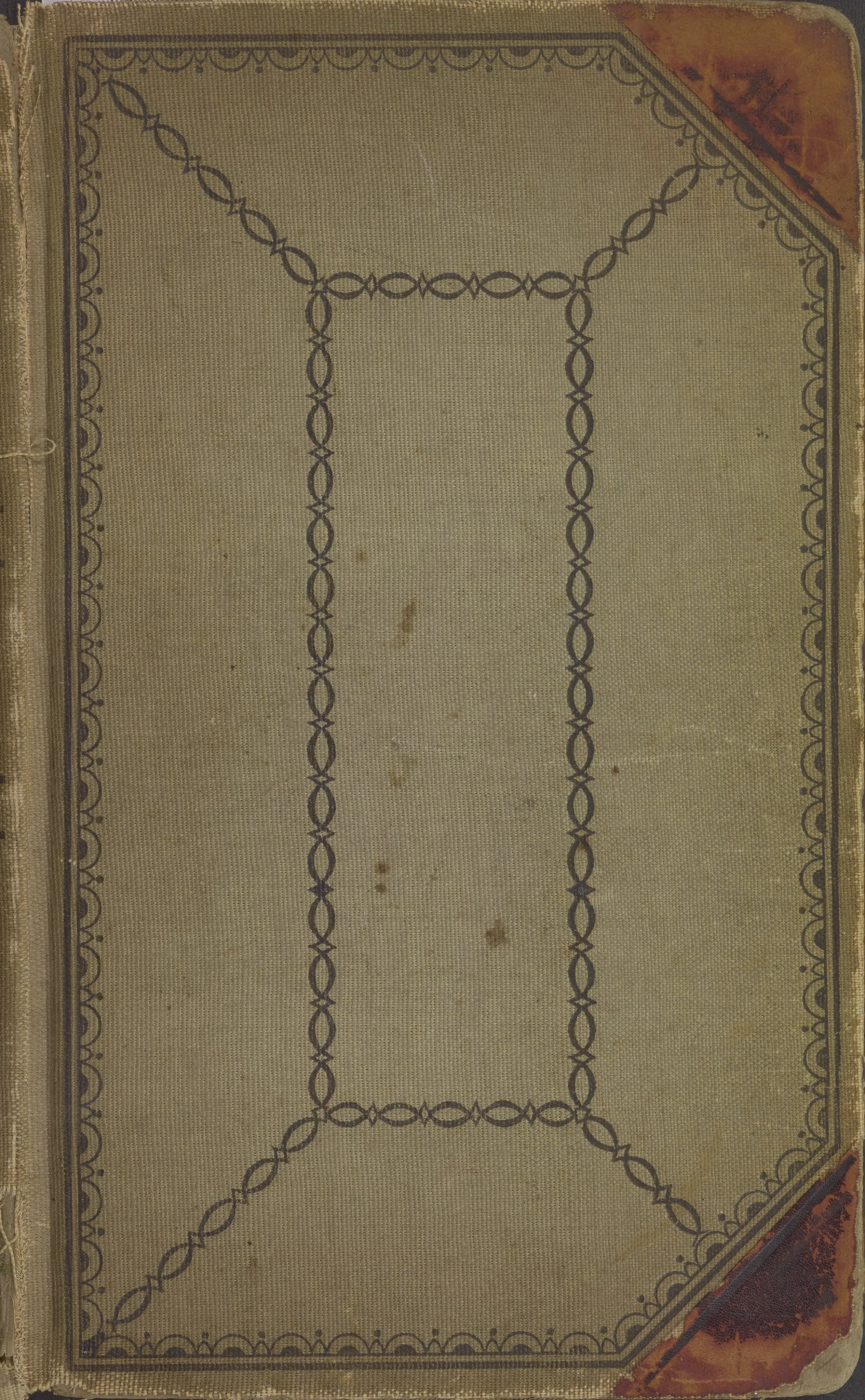


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{ Arram Rumen  
Arum

A. W. Gray.  
2632 Channing Way  
Berkeley Calif.

Pollen grains germinate readily in following in from  
1 to 3 hours.

16% Sugar Solution

1.5% gelatine

Tap Water

For large pieces of Arbutus go to  
Emmanti White Ground Liberty Rd to Rockdale.

R  
Mun. Arum — 3 i  
Codoni — — 4 i  
Sp. Chloroform — 3 i  
Sp. Pen. Virgin g.s. ad 3 i  
Dose 3 i 3 or 4 times a day.

# Notes to Tramps.

1904

- March 19 Arrived at the mouth of the little ravine. I stopped to have a look at the various green things growing on the large willow. A pretty liverwort attracted my attention and I took some of it carefully from the tree. It proved to be Trullaria Virginia<sup>v. p. 51.</sup> As I descended to the Skunk Cabbage region, one of the first things to attract my attention was a nice heap of the seeds of this plant. For some time I have been wishing to settle the question - "How long before the seeds germinate?" I did not, therefore disturb the seeds, but carefully noted the spot where they were, first by marking the two large trees between which they lay and then by planting close to them a twig of Tupelo tree to which I had tied a cross piece making a cross. I should have by all means counted the seeds. Did not think of it, will do so in the future. As we walked along the shore, on our way to Chair's Wharf, I kept a sharp look-out for liverworts. Just before reaching the little shanty<sup>\*</sup> overlooking the water, I found a very pretty one growing on the steep bank and partly covering a piece of iron ore. I took some of it with me, but have thus far not been able to determine it. Just beyond Chair's orchard and not far from the house, we found a pretty Maple - Acer dasycarpum<sup>v. p. 50.</sup> in full bloom. The blossoms were all staminate.
- March 21 In the little ravine, close to the spring I found growing on the wet ground, Pellia epiphylla, Reddi<sup>v. p. 52.</sup> beautifully fruited. I secured a number of nice specimens. It was quite abundant and I found it in several places. While searching for the Smilacina racemosa, I found a pretty liverwort growing on the ground among the mosses near the foot of a tree. It was not in fruit, but I make it Chiloscyphus polyanthos, Cudr. While looking for Skunk Cabbage I found a specimen which had gone to fruit. I marked the tree close-by and also the plant by plunging a stick into the ground close to the plant. I marked the stick with two cuts near the top. I will observe the plant during the year.

Plants found in bloom  
1. Symphoricarpos  
2. Stellaria media  
3. Acer dasycarpum } p. 50.

In the ditch, I found Chrysothamnus Americanum in bloom also plenty of Spargyria.

I found but one <sup>v.p. 51</sup> Maple in bloom on the road in Brooklyn. I marked the tree carefully to observe if any pitillate flowers come later. I observe that the staminate flowers do not smell sweet, no odor at all is noticeable.

Plants in bloom.

<sup>p-51</sup> Symplocarpus foetidus, Salisb. <sup>p-51</sup> Acer dasycarpum, Ehrh.

Chrysothamnus Americanum, Schum. (4)

Pellia epiphylla, Raddi. Pallavicinia Lyellii, S. P. Gray.

Islediteschia triacanthos, L. Parsing one of these trees, I picked up two pods. I find that the seeds are arranged to one side of the pod - the ventral suture, not, however, attached directly to it, each seed having a funiculus. The seeds are quite flat, and anatropous rather an exception for one of the Leguminosae. The embryo is therefore, perfectly straight. It is surrounded by endosperm, something again rare for this order. The seeds now are greatly shrivelled up, not wrinkled however. When placed in water the swell up to several times their size. It is then easily dissected. The seed-coat is horny, both in appearance & texture. The endosperm, now easily removed is white and translucent. It is tasteless and gives no reaction for starch. The germinating embryo, however, shows the reaction, starch being quite abundant in the cotyledons, which even in the seed-coat are green.

I observed that the seeds alternately had the micropyle turned once toward the ventral suture & once toward the dorsal. Those turned toward the dorsal were apparently undeveloped. These latter observations will have to be confirmed.

March 26. To-day, I secured quite a number of the pods of the Islediteschia. I wished to see if my recent observation regarding the position of the seeds in the pod was correct. I opened the pods very carefully and again noted that some of the seeds had the hilum turned away from the placenta. The number of such seeds in each pod was variable, some had but one, some two, some several. They <sup>do</sup> not, therefore, appear so regularly in all pods, as at first noted. I observed, also, that the seeds with hilum towards the placenta, were arranged in two different positions, some with raphe

towards the apex of the pod and come with it towards the base. No doubt the seeds with hilum turned away from the placenta were likewise arranged in two positions. I surmise now that it must be the wind shaking the seeds in the pods that has caused these various positions. Will look into the matter further.

I marked the place of another <sup>v. p. 52.</sup> Skunk Cabbage that had set fruit. It was in the first little swampy region to the right, close to the middle (part) of a fallen tree trunk. On the hillside, where the early Arbutus grows, I found several patches of Beomyces rosea - a beautiful little lichen recognized by its tiny globular heads of a delicate shade of pink scattered thickly on apparently barren ground.

Specimens of Trullaria were found in two places. One, on a tree where about to climb the hillside to the old house overlooking the early Arbutus locality. And the other, on a dead tree stump, close to the ground, near a little ravine close to Pumphrey's Station. On the hillside, not far from the house, several Paulownia may be found.

The <sup>v. p. 55.</sup> pictillate flowers, I should say the perfect flowers, of the Acer dasycarpum are not beginning to bloom. These flowers are protogynous. The pretty purplish red stigmas are quite noticeable; whereas the stamens are hardly observable. As already mentioned (v. p. 50) the pistillate flowers come first. These are found some distance from the tips of the branches. As one approaches the tip one comes to a cluster composed partly of staminate, and partly of hermaphrodite flowers. Beyond this cluster, towards the tip we find hermaphrodite flowers only. I still do not observe any oaks.

#### Plants in bloom.

<sup>p-53.</sup> Acer dasycarpum, Ehrh.

<sup>p-53.</sup> Epigaea repens, L. (7)

<sup>p-53.</sup> Alnus serrulata, Willd. (8)

<sup>p-55</sup> Stellaria media, Smith.

<sup>p-55</sup> Caprilla Bursapartoris, Moench, (5)

<sup>p-54</sup> Symphlocarpus foetidus, Salisb.

<sup>p-55</sup> Chrysosplenium Americanum, Schum.

<sup>p-53.</sup> Draba verna, L. (6)

March 28 Plants in bloom.

<sup>p-54</sup>  
*Populus alba* L., (9.) Staminate. Riverside Park.

" 29. Before going to Brooklyn, I visited the Tunilago Parfara spot south of Riverside Park. As but one flower was found, I judge that the plants are just beginning to bloom.

Seeing a plant of <sup>p-54</sup>*Symphlocarpus foetidus*, with two pretty apathes, in the soft alluvial soil of the flood plain in the little ravine, I thought I would dig it up. I dug very carefully and finally came to the rhizome, 18 inches below the surface of the ground. I tried to get the plant up, using a dead tree-trunk as a lever, and succeeded to break the head from the larger end of the rhizome. I examined some of the roots that came up with the crown, and noticed that they were scarcely wrinkled at all. Near this plant I found more than 30 seeds. These I planted in 3 sections of 10 in each, in 3 different spots. No. 1. was close to an Elder a few feet from the more-covered broken tree-trunk (v. p. 51.). I marked the spot by tying a piece of wire around the shrub near the bottom. No. 2. was close to the plant in the middle of the fallen log. No 3. close to the plant marked on Mar. 21, (v. p. 49.) I see that this plant is only up the hill-side from spots 1 & 2. *Pellia epiphylla* is still found in fruit.

In the rear of St. Mary's Industrial School is a thinly wooded tract of land. A path runs through it not far from the road. This path leads past a little pond. Not far from it I found a few willows, showing their catkins. I marked the spot by cutting a mark on the red oak almost opposite and by breaking off the tops of two small pines. Following this path towards the school, one comes to a spot, somewhat open, and from it, houses in Marell Park can be plainly seen. So in the direction of the houses. Here in a little valley grow hundreds of willows.

Plants in bloom.

<sup>p-60</sup>  
*Tunilago Parfara*, L., (10.).

" 30 I heard to-day that <sup>p-54</sup>willows with beautiful long catkins are growing on Ferris' place at Sovanstown. Take York Rd entrance.

\* Seed of *Peltandra undulata*.

April 2. Throughout the Swan Creek region, one may find the Sweet Gum, *Liquidambar styraciflua*, L. All over the ground, are now scattered last year's fruits. Here, too, occasionally, particularly in the little ravines, which abound, one finds a small patch or an isolated specimen of *Tipularia*<sup>p-55</sup> *discolor*, Nutt. The most important find of the day was made near one of the little landings. We had descended to collect a few specimens of *Myriophyllum*, when I found, floating on the water a very large seed. Soon others were found some in the water and some, the greater number, on the shore. They were as large as Skunk Cabbage seeds, but ~~had~~ not their shape, being more oval than spherical. Some were encased in a gelatinous mass, which we soon recognized as aril and, seeing the abundance of *Nymphaea odorata*<sup>\*</sup>, Ait. close by, knew that our seeds were those of this pretty water-plant. Some of the seeds had already sprouted and the well-developed plumule was well out of the seed. The two cotyledons do not expand; in the specimen, I cut open, I found them grown together. The gelatinous covering, no doubt, protects the seed; for the cotyledons are quite fleshy being well-stored with starch. I tasted a bit of it and found it palatable, having a flavor, somewhat like that of a raw sweet-potato. After chewing the bit of seed a little while, I observed a slightly burning after taste.

Plants in bloom.

<i>Acer</i> <sup>p-54</sup> <i>dasycarpum</i> , Ehrh.	<i>Draba</i> <sup>p-55</sup> <i>verna</i> , L.
<i>Acer</i> <sup>p-55</sup> <i>rubrum</i> , L. (1)	<i>Epigaea</i> <sup>p-55</sup> <i>repens</i> , L.
<i>Alnus</i> <sup>p-54</sup> <i>serrulata</i> , Willd.	

The tributary leading from the haunted house is well worth following. In it, near its head, is found *Ornithogallum umbellatum*, L., and farther down, quite a colony of *Lycopodium obscurum*, L.

April 4 In the little pond, in the ravine, near the pump-house were both frog's eggs and salamanders' eggs. The latter were considerably spread and floated on the surface of the water, whereas the frog's eggs were attached to sticks, blades of grass, etc. below the surface. They had very much the appearance of floating green algae. I took some of the eggs in my hand and observed that the <sup>embryos</sup> salamanders were nearly ready to hatch. On my way through the ravine, I observed several spots where Erythronium was coming up. I have pleased me, therefore, to find a few actually in bloom, in the moist soil not far from Owl Spring. Later too, I found more than a dozen, wide open at the spring near the Bluff. I think it well to note these spots, as being so favorable for producing early Erythronium blooms. My transplanted Hepatica acuta is alive and is sending forth new leaves. The transplanted Lygodium, too, is still alive. Between Camp Run Spring and Run Camp I found many Hepatica Dentaria heterophylla is rather backward this year and so too, is Arenouella thalictroides.

On my way up Hilton Av. I observed <sup>p-55</sup> Willows with catkins close to the stable on the hillside.

#### Plants in bloom.

Acer dasycarpum, Elmh.

<sup>p-55</sup> Alnus serrulata, Willd.

Corylus Americana, Walt. (13)

<sup>p-57</sup> Equisetum arvense, L. (16)

<sup>p-57</sup> Erythronium Americanum, Ker. (15)

<sup>p-57</sup> Hepatica triloba, Chais. (12)

<sup>p-57</sup> Poa brevifolia, Muhl. (14)

<sup>p-55</sup> Populus alba, L.

<sup>p-55</sup> Symplocarpon foetidum, Salicb.

9. While looking for Stump Cabbage, I found a number of the seeds in the meadow. I took 10 of them and carefully marked the spot where I placed them. The tree nearest the spot was marked by tying a copper wire around the trunk on which I marked  $\frac{1}{111}$  which meant that the seeds were  $\frac{1}{3}$  of the distance between the tree & a fallen tree trunk, being nearer the tree-trunk. Around the seeds, I struck up pieces of bark Under the fallen tree-trunk and also near the seeds. I observed two fine plants <sup>each</sup> with a flower that will possibly form fruit. Flowers of this plant are now becoming scarce. In many of the spider webs have made their homes.

Throughout the little ravine I observed beautiful symmetrical spider webs. To-day, they were covered with drops of moisture from the fog, and stood out in bold relief.

Close to spring on H's place, beyond S's. I found a nice patch of Pipularia discolor.

<sup>p-56.</sup>  
Willows were observed on the left side of the road to Marley, between the Hankins Point Road and the blacksmith shop; also some on the Hankins Point Road opposite the houses.

The various colors of the blossoms of Acer rubrum <sup>p-56</sup> were observed. One tree with beautiful yellow blossoms was observed on the shore of the creek, opposite to our camp. Do all of the blossoms of this plant smell sweet? Some do at any rate. And do any of the blossoms of A. dasycarpum smell sweet? Some do not, at any rate.

In a number of places, in the Swan Creek region I found Myrica asplenifolia, Endl., however, not in flower.

#### Plants in Bloom.

<sup>p-57</sup> <u>Acer rubrum</u> , L.	<sup>p-57</sup> <u>Lindera Benzoin</u> , Blume, (19)
<u>Alnus serrulata</u> , Willd.	<sup>p-59</sup> <u>Crotonium aquaticum</u> , L. (21)
<sup>p-61</sup> <u>Caprilla Bore-fectoris</u> , Murch.	<u>Populus alba</u> , L.
<sup>p-57</sup> <u>Coarct</u> (22)	" <u>grandidentata</u> , Michx. (20)
<sup>p-59</sup> <u>Lobysplenium Americanum</u> , Schum.	" <u>monilifera</u> , Ait. (17)
<sup>p-61</sup> <u>Draba verna</u> , L.	<sup>p-57</sup> <u>Sanguinaria Canadensis</u> , L. (18)
<sup>p-57</sup> <u>Epigaea repens</u> , L.	<u>Salix</u> (23)
<sup>p-51</sup> <u>Stellaria media</u> , Smith	
<sup>p-57</sup> <u>Symphlocarpon foetidum</u> , Salisb.	

April 12. Three colors of Hepaticae are found:—pure white, purple and pink, The pink and white occasionally variegate. I have been trying to find the cause of the difference in color, but thus far have not succeeded. Does the color change with the age of the flower, or are the petals colored thus, from the beginning. The first view may possibly be the correct one, blue being the last change in color. That this may be the correct view is shown by the fact that fallen petals' shanty change (?) blue. I found

Dua palmatic is now beginning to bloom. It came in mind that I had never seen the fruit of this pretty shrub, and I thought I might be able to secure some by cross-pollination. This, however, I was not able to do, for although the stigmas are now ready to receive pollen, the stamens are not yet ready to shed any. This plant, therefore, is protogynous.

We ate our dinner at Gentian Place. It is here that I planted several bulbs of Taillia<sup>p. 60</sup> grandiflorum. I examined the spot near the stream first, and here I found 3 plants coming up. I next visited the spot up the hillside, and here I found one plant.

I searched carefully for seedlings of Gentiana crinita but could not find any, no doubt, failing to recognize them.

The locations of a number of large Aplectrum humale plants were noted. Quite close to Run Camp, I observed a large well-formed leaf not far from two trees (about 1 ft. apart) near opposite the camp.

On the way, down the stream another large plant is found. Then at Camp Cozy a nice colony, one plant still with last year's fruit. But the largest plants were observed in the ravine at Glenastrey. Here several very large plants were found, all on the right bank. The first one was close to a large Juglans cinerea not far from the path. I marked the tree with my trowel. Up the stream farther, inside of the wire fence I saw another, and then again in the glade near the forking of the stream.

In this ravine, I found, too, a plant of Smilax hispida. It was growing between two trees, which I marked. This was near our old camp and in view from one of those fine old beeches.

I observed that both staminate and pistillate flowers of the Acer rubrum have the same sweet delicate perfume. The pistillate flowers, thus far observed have always been deep red, whereas the staminate flowers are generally of a bronze color.

<sup>p. 57.</sup>  
Willows were observed in the following places. Near the Pump House at Glenastrey, and on Wilkins Av. near Catonsville Av. Several species were observed and both staminate and pistillate flowers.

Plants in bloom

- |   |  |
|---|--|
| <sup>p-59</sup><br><i>Acer rubrum</i> , L.                    | <sup>p-59</sup><br><i>Lindera Benzoin</i> , Blume.             |
| <sup>p-59</sup><br><i>Anemone thalictroides</i> , Spach. (30) | <sup>p-59</sup><br><i>Luzula campestris</i> , D.C. (36)        |
| <sup>p-59</sup><br><i>Asarum Canadense</i> , L. (37)          | <sup>p-62</sup><br>" <i>vernalis</i> , D.C. (33)               |
| <i>Carex</i>  | <i>Negundo aceroides</i> , Munch. (25)                         |
| <sup>p-59</sup><br><i>Claytonia Virginica</i> , L. (32)       | * <i>Poa annua</i> , L. (24)                                   |
| <sup>p-59</sup><br><i>Dentaria heterophylla</i> , Nutt. (29)  | <sup>p-62</sup><br>" <i>brevifolia</i> , Muhl.                 |
| <sup>p-61</sup><br><i>Dicentra cucullaria</i> , D.C. (35)     | <sup>p-59</sup><br><i>Sanguinaria Canadensis</i> , L.          |
| <sup>p-59</sup><br><i>Dryas palustris</i> , L. (28)           | <sup>p-59</sup><br><i>Saxifraga Virginica</i> , Michx. (34)    |
| <sup>p-59</sup><br><i>Equisetum variegatum</i> , L.           | <i>Salix</i>   |
| <sup>p-59</sup><br><i>Erythronium Americanum</i> , Ker.       | <i>Symphlocarpus foetidus</i> , Salisb.                        |
| <sup>p-59</sup><br><i>Hepatica triloba</i> , Chis.            | <sup>p-60</sup><br><i>Ulmus Americana</i> , L. (26)            |
| <sup>p-62</sup><br><i>Houstonia cantabrigiae</i> , L. (31)    | " <i>fulva</i> , Michx. (27)                                   |
|   | * <sup>p-62</sup><br><i>Obolaria Virginica</i> , L. (30½ - 38) |

April 14 Willows both staminate and pistillate were found on this trip in several places. First near the run, before coming to Franklin Rd; then come on Franklin Rd; and finally come along the falls.

" 15<sup>+</sup> Observed to-day that the American Elm is in full bloom whereas the Slippery Elm is in most cases only beginning to unfold its buds.

" 16 To-day, I visited the Schweinitzia place. It was in flower. I observed quite a number of last year's stalks, here and there, but this year's flower stalks occupied entirely different spots. It would seem, therefore, that the plant is either an annual or biennial. Stopped also, to examine the Divina. One plant is still alive, but does not look flourishing.

Plants in bloom.

- |   |  |
|---|--|
| <sup>p-59</sup><br><i>Acer rubrum</i> , L.        | <sup>p-62</sup><br><i>Epigaea repens</i> , L.                |
| <sup>p-59</sup><br><i>Lindera Benzoin</i> , Blume | <sup>p-62</sup><br><i>Siegbornium Thaliana</i> , Loand. (39) |
| <i>Schweinitzia odorata</i> , Ell. (41)           | <sup>p-62</sup><br><i>Symphlocarpus foetidus</i> , Salisb.   |
|   | <sup>p-62</sup><br><i>Taraxacum officinale</i> , Weber (40)  |

Willows were observed in several places. Just beyond Breunin on the left side of the road were several plants, staminate &c. &c. pistillate. In the swamp, beyond the path leading to Bent shanty were a great many.

I found

April 17 To the little ravine in Brooklyn. Because of the cold winter my Veronica Bushmanii died down to the ground and little seedlings are only now beginning to take its place. For some time I have been thinking of planting some of it in the woods but never did so. To-day, I took a number of the seedlings and transplanted them here in the little ravine. I planted them in three different spots. One in a little side ravine up from the spring. This little ravine runs about <sup>N</sup> east and <sup>S</sup> west being deepest at the north end. The south end is not far from the path leading to the spring. It was at this end, on the slope facing the east that I planted the Veronica. My second lot was planted on the right bank of the stream above the spring. A little mound of stones marked the place. And my third lot of seedlings was planted on the little mound around which the stream bends so gracefully. I marked the spot by driving a stick into the ground and marking two little trees close by.

In the Skunk Cabbage region beyond the ravine, I find Anemone nemorosa in great profusion. It is now beginning to flower.

To-day, too I transplanted a small bit of Schmiedtzia, close to an old stump not far from the path. I marked the two trees between which was the stump. One of trees, the one nearest the path was marked also on the side facing the path.

I visited the Pipularia locality. The plants do not look very flourishing, it seems as if some of the trees have been removed. A nice patch of this plant was found near a large Tulip tree along side of which may be found a small poorly developed Hickory. An old tree stump stood <sup>in front of</sup> before the larger tree, on this I placed an old cut down tree.

#### Plants found in bloom.

<u>Antennaria plantaginifolia</u> , Hook. (42)	<u>Barbarea praecox</u> , <u>almost</u> v. p. 60.
<u>Anemone nemorosa</u> , L. (43)	<u>Dentaria laciniata</u> , Muhl. (44)

In the swampy region close to the shore Orontium aquaticum was flourishing. It was in full bloom.

Asar dasycarpum is done blooming and its fruit is beginning to become noticeable. Asar rubrum on the other hand is now at the

height of its blooming period.

April 19. Near the Pump House are several Elm trees Ulmus Americanus. In the meadow, I had better say in the marshy woodland above the Pump House immediately below the dam I found Erythronium Americanum growing by thousands. A great many of them were blooming to-day and presented a most gorgeous sight. On the path to the dam I found some willow in bloom both staminate & pistillate.

Tried my experiment to-day of pollinizing the flower of Daia palustris. I marked three of the flower clusters although I pollinated quite a number.

I now kept a look-out for plants of Aplectanum. A large patch of eight were about a short distance above the camp close to a fallen tree. The tree can be easily picked out, as it has another tree trunk lying across it.

The pretty specimen close to the camp and not far from the two trees was marked by planting a twig close to it. And so also was the specimen a short distance beyond further down the run. I marked it also placing a fallen tree trunk with a pencil curve, in such a position that the curve was quite close to the flower.

In the swampy ground near Owl Spring I found a frond of Onoclea sensibilis fully expanded. Here, too, I found a blooming plant of Viola cucullata.

Asarum rubrum, L.  
Anemone thalictroides, Spach.  
Antennaria plantaginifolia, Hook.  
Asarum Canadense, L.  
Cassandra calyculata, Don. (45.)  
Claytonia Virginica, L. (45.)  
Chrysosplenium Americanum, Schreb.  
Dianthus heterophyllus, Nutt.  
 " lacinia, Muhl.  
Daia palustris, L.

Erythronium Americanum, Ker.  
Equisetum arvense, L.  
Hepatica triloba, Chais.  
Lindera Benzoin, Blume.  
Lithospermum arvense, L. (46.)  
Lygula campestris, D. C.  
Orontium aquaticum, L.  
Sanguinaria Canadensis, L.  
Saxifraga Virginiana, M.  
Stellaria media, Smith.

as in  
 scanty  
 I found

*Turcillago parviflora*, L.

*Ulmus Americana*, L.

*Viola* <sup>p-66</sup> *bicolor*, Pursh (47)

*Viola* <sup>p-62</sup> *cucullata*, Gray 48.

*Viola* <sup>p-66</sup> *puberta*, L. 49.

April 21 A nice patch of *Erythronium* may be found on the right bank of Ewing's Falls immediately south of Franklin Rd, where it crosses the stream.

22. Plants in bloom,

*Barbarea* <sup>p-61</sup> *praecox*, R. Br. (50)

*Viola* <sup>p-62</sup> *minor*, (51)

My well-known plant of *Diaca* on the left side of the road near the path leading to the run is not yet in bloom.

23 Following the path leading to Fox Run we come to a pretty patch of *Erythronium* <sup>v. 61</sup> just where the path crosses the run.

To-day instead of crossing the brook when I reached the ravine I staid on the left bank. Just a short distance from the run is a nice patch of *Equisetum hyemale*. Passing it and proceeding towards the culvert, I next came to a very large patch of *Asarum* <sup>v. p. 61</sup> on the hillside, in it were hundreds of plants in bloom.

On the railroad embankment *Corydalis flumida* was found in bloom. To-day, I searched for *Proserpinaca* *proserpinacoides*, I was afraid that the ice gorge had possibly injured its habitat permanently. After a little search I found some of the plants but they were not yet in bloom.

A nice little patch of *Manchuria* <sup>v. p. 62</sup> *polymorpha* was found on the River Rd almost opposite the culvert at Belmont. Last year's (?) strike rather idled branches were still on the plant and a number of gemmae were very conspicuous.

Arrived at Gentian Place I visited my *Pilgrim grandiflorum* spot. Three of the plants have unfolded their leaves beautifully and show the bud already well-developed. Plant No. 4. has not yet appeared above ground.

While going along the Ridge Rd, I was surprised to find a plant of *Epigaea repens* with several upright branches. The flowers were very conspicuous, even from the road, and attracted my attention.

The colony of *Helonia ballata* is flourishing. It seems that most of the plants will bear flowers. The flower-cluster already is quite conspicuous. Alongside the flower-

bud is also a large leafy shoot. One plant, more precocious than the rest was already in bloom; it had a very short flower-stalk, however. There are two patches of this pretty plant, one near the head of the swamp and one near the middle. The entrance to the one near the middle is close to a telegraph pole, and being quite wide is not easily missed. The path is well-marked, almost to the plants and passes through a large patch of Skunk Cabbage. While trying to find the *Helonias* we found a lilium-like plant coming up which I did not recognize. I marked the spot where it grew by cutting the bark of several trees close by. In this swamp are quite a number of plants of *Veratrum viride*. Near the head, too, I found a few plants of *Anemone nemorosa*.

On our way homeward, we took the path, just north of the bridge crossing the Patuxent. It leads to and across the flood-plain of the river. I was glad we took the path and very glad I followed the stream keeping on its right bank. A number of interesting plants were observed. First of all, *Vivale tricolor* var. *arvensis*, then several patches of *Dentaria laciniata*, a very large one of *Asarum*, and one of *Anemone nemorosa*, also one of *Erythronium*. But perhaps the best find of all was the immense patch of *Equisetum arvense* on the railroad embankment consisting of thousands of plants. The plants already were far advanced, showing the locality to be an early one.

A nice patch of *Urtica minor* was found along the Ridge Road.

### Plants in bloom.

*Acer rubrum*, L.  
*Amelanchier Canadensis*, F. & S. (50)  
*Anemone nemorosa*, L.  
*Anemone thalictroides*, Spach  
*Antennaria plantaginifolia*, Hook.  
*Arabis trifolia*, Dru & Planch. (54)  
*Asarum Canadense*, L.  
*Berberis pinnata*, R. & S.

*Caprilla* <sup>p-66</sup> *Bursa-pastoris*, Muhl.  
*Carex*  
*Carex Pennsylvanica*, Lam. (52)  
*Corydalis flavula*, D. C. (53)  
*Claytonia Virginica*, L.  
*Dentaria heterophylla*, Nutt.  
*Dentaria laciniata*, Muhl.  
*Dentaria Canadensis*, D. C.  
*Diaba verna*, L.

re. *Urtica*  
 shanty  
 I found

\* In the way found several nice patches of Lycopodium complanatum. Just beyond the spring in a little hollow, I found L. lucidulum.

<sup>p-67</sup>  
*Verica salustria*, L.  
<sup>p-66</sup>  
*Epigaea repens*, L.  
<sup>p-66</sup>  
*Erythronium Americanum*, Her.  
<sup>p-66</sup>  
*Equisetum arvense*, L.  
*Euphasia speciosa*, L. (60)  
<sup>p-66</sup>  
*Fragaria vesca*, L. (64)  
<sup>p-66</sup>  
*Houstonia caerulea*, L.  
<sup>p-66</sup>  
*Helonias bullata*, L. (61)  
<sup>p-66</sup>  
*Hepatica triloba*, Chaix.  
<sup>p-66</sup>  
*Lindea Benzoin*, Blume  
<sup>p-66</sup>  
*Lithospermum*, L.  
<sup>p-66</sup>  
*Luzula campestris*, D.C.  
<sup>p-66</sup>  
*Luzula vernalis*, D.C.  
<sup>p-66</sup>  
*Mitella diphylla*, L. (58.)  
<sup>p-66</sup>  
*Obolaria virginica*, L.

<sup>p-66</sup>  
*Oxentum aquaticum*, L.  
<sup>p-66</sup>  
*Poa brevifolia*, Michx.  
<sup>p-66</sup>  
*Ranunculus abortivus*, L. (63)  
*Salix discolor*, Michx. (57)  
<sup>p-66</sup>  
*Sanguinaria canadensis*, L.  
<sup>p-66</sup>  
*Saxifraga virginica*, Michx.  
<sup>p-66</sup>  
*Saxifraga Thaliana*, Sand.  
<sup>p-66</sup>  
*Stellaria media*, Smith  
<sup>p-66</sup>  
*Stellaria pubera*, Michx. (55.)  
<sup>p-66</sup>  
*Synphlocarpus foetidus*, Salisb.  
<sup>p-66</sup>  
*Taraxacum officinale*, Weber  
<sup>p-66</sup>  
*Viola cucullata*, Gray.  
*Viola villosa*, (56.)  
<sup>p-66</sup>  
*Viola tricolor var. arvensis*, (62.)  
<sup>p-74</sup>  
*Verica minor*, Plate 47.

Observed to-day that Heer rubrum, which I thought dioecious is not strictly so. The Staminate flowers are really perfect, the pistil developing quite late. I observed also the pretty glands - nectaries - between the stamens.

April 26. In going to Glen Ellen I took the road leading to Hampton. On the way noted two fine places for Verica minor.<sup>v. p. 64</sup> The first on the Dulaney Valley Pike just beyond Tower. The hill-side on the left is covered. The second was close to the entrance to Hampton, also on the left side. To-day, I had little trouble finding my way from Glen Ellen to the Gunpowder. I took the path leading up the hillside. It took me up the hillside to a broad path\*. I followed this path and found that it brought me to the path leading to the spring and to the road. All along the Dulaney Valley Pike and also along the road to Glen Ellen, I found young, thrifty plants of Cynoglossum officinale, L. They do not yet show any sign of buds. As I passed the limestone rocks on which Pellaea atropurpurea, Link. grows so luxuriantly, I stopped to examine them. I was very much pleased to find on them Marchantia polymorpha. Later too, I found the plant on ledges of rock at the first Orienta places. Orientea was blooming, it was at its best. I found it growing at four different spots. Spot number one, is just beyond the three-arched bridge. The hillside for

quite a distance is lined with the plant. Number two is close to the road as it approaches the river beyond the Dulany Valley bridge. Number three is on the left side of this river road beyond spot number two.

It is here where the Mertensia grows. And spot number four, on the same side of this road but closer to the Dulany Valley Pike. Not far from this latter spot I found several plants of Juniperus communis.

Mertensia is not yet in bloom, will be no doubt in about a week. For some distance, along this road, grow many Juniperus Virginiana, now in bloom. Dicentra laciniata was found in several places, but most abundantly along with the Dicentra in spot number two, and also on the bank of the river a short distance <sup>rather</sup> down the stream <sup>from this spot</sup>. It was here this latter spot that I found several plants of Sparganium lanatum just well-out of the ground. The Walking-leaf Campthoecus rhizophyllus is very abundant on the rocks among the Dicentra at spot number two.

Three most excellent finds were made to-day. First the Marchantia, second, best of all, the Juniperus communis, and third a fine patch of Equisetum hyemale <sup>v. p. 64.</sup> with fertile spores disseminating spores. The latter was found on my way home on the west side of the Dulany Valley Pike a short distance beyond the toll-gate. I observed that the spore-cases were unusually large and upon examination found the green spores creeping. The appearance of the plant, now, is quite different from its appearance during the winter. During the winter the spore cases, filled with spores, are quite shrunken. It would seem that with the approach of warm weather in spring, growth takes place, the spore case becomes several times its size during winter. The white bands on this plant showed out beautifully to-day. I do not remember ever seeing them so conspicuously. At the old house, near the spring I found Equisetum arvense. It is quite plentiful. Sterile spore-shanty still backward. I found

Plants in bloom.

*Equisetum hyemale*, L. (68)      *Chamaecyparis sphaeroides*, Spach (41½ - 66)

*Juniperus Virginiana*, L. (41¾ - 67)

*Nepeta* <sup>p-66</sup> *glehmannae*, Benth. (65)

*Epigae repens* was found on the hillside, near the spring, on the way to Helen Ellen. One plant of *Corydalis flavula* was found with the *Dicentra* near the *Juniperus communis*.

On the Delany Valley Pike found many plants of *Lysichiton albertianus*.

April 29 A nice "find" to-day was to find *Buxus sempervirens* in bloom. A fine specimen of this shrub is standing near the entrance of the large estate on the left side of the road (Shirley Lane).

When we passed through the *Equisetum hyemale* locality, I stopped to examine the plants. I find the spore-cases beginning to open but they are not as far advanced as those found on Tuesday, neither were they as plentiful.

*Vicia minor* is quite abundant on the hillside on the left side of the road near the spot where we enter the woods.

In the swampy region *Symphoricarpos foetidus* is growing luxuriantly. The *Amelanchier* and the *Cherry* were in full bloom.

Plants in bloom

*Ranunculus ficicularis*, Muhl (69)

*Thalictrum dioicum*, L. (70)

In several places we found *Erythronium* growing most abundantly.

In every large patch there are both sterile and fertile plants. The sterile plants have but one leaf whereas the fertile ones have two leaves with the flower-stalk growing out from between them. To-day, however, I found a fertile plant with but one leaf, not a trace of a second one being visible.

30 I took the route part W<sup>est</sup> and to the open field, then to Owl spring and followed the brook to the river.

At Owl spring, I planted some *Veronica Bartramia*. Some between two trees a short distance to the north-west of the spring; and some on the little hillside close to the *Oreocaulum* locality. The little hillside is between the <sup>old</sup> bed of the brook and the present, and within sight of the fall tree near the *Tifolia* spot. At both places, I marked

the exact spot by putting a stick in the ground and by making the trees near by. In this same locality, I planted several willow cuttings in the marshy ground. These were cuttings of the tree near F's. and were already well rooted. Some two, were planted farther down the stream at Camp Run.

I observed to-day the thickened tubercle roots among the many fibrous ones of Thalictum divicium. Had opportunity, too, to collect both staminate and pistillate plants.

The rootstock, too, of the Arenaria nemorosa is too, rather fleshy. It seems to be stoloniferous. A number of these plants were found in the ravine, but the greatest number, by far were found in that pretty spot at the junction of the B & P. R. R. and the Patuxent river. I hardly know what to name this garden spot. Here grows Dentaria laciniata most beautifully with leaflets cut variously. I observed how much more deeply the roots of this species are buried in the ground than those of D. heterophylla. I find too that the size and shape of the leaves of this species are very variable. Here too, may be found that large patch of Asarum, which I think will prove to be a different variety from that found in the more rocky regions. Here, too, I find a large patch of Urtica perfoliata.

It was past four o'clock when I reached the Helianthus swamp at Stony Run. To-day they were in full bloom. It is wonderful what an amount of growth has taken place since last Saturday. So much, in fact, that one hardly recognizes the place as being the same one visited last week. In this swamp is a nice patch of Verianthemum, one also near the newly discovered spring beyond the water trough. The largest patch, however, was found on the bank of Stony Run between the water trough and the tool house, just where the tracks of the railroad have recently been moved to the east. Thousands of the plants may be seen here. Oxalis acutifolia is also very common. I found

While on my way along the River Rd., I visited my *Trillium grandiflorum* spot and found three of them almost open. Those on the hillside are not doing very well.

To-day, the *Amelanchier* is in full bloom, as also the peach trees and the cherry trees.

On my way home, I found a beautiful Luna moth that had just emerged from its chrysalis state.

### Plants in bloom

- |   |   |
|---|---|
| <i>Anemone</i> <sup>p-78</sup> <i>thalictroides</i> , Spach     | <i>Lithospermum</i> <sup>p-69</sup> <i>arvense</i> , L.         |
| <i>Anemone</i> <sup>p-68</sup> <i>nemorosa</i> , L.             | <i>Mitella</i> <sup>p-79</sup> <i>diphylla</i> , L.             |
| <i>Asarum</i> <sup>p-74</sup> <i>Canadense</i> , L.             | <i>Nepeta</i> <sup>p-79</sup> <i>latechoma</i> , Pursh          |
| <i>Amelanchier</i> <sup>p-68</sup> <i>Canadensis</i> , Fx B.    | <i>Obolaria</i> <sup>p-71</sup> <i>Virginica</i> , L.           |
| <i>Antennaria</i> <sup>p-68</sup> <i>plantaginifolia</i> , Hook | <i>Okeria</i> <sup>p-69</sup> <i>acilifolia</i> , Watson (75)   |
| <i>Barbarea</i> <sup>p-68</sup> <i>vulgaris</i> , R. Br. (72)   | <i>Orontium</i> <sup>p-69</sup> <i>aquaticum</i> , L.           |
| <i>Arabis</i> <sup>p-74</sup> <i>trifolia</i> , DC. & Spach     | <i>Poa</i> <i>brevifolia</i> , Muhl.                            |
| <i>Arabis</i> <sup>p-74</sup> <i>lyrata</i> , L. (71)           | <i>Pedicularis</i> <sup>p-69</sup> <i>Canadensis</i> , L. (80)  |
| <i>Arisaema</i> <sup>p-78</sup> <i>triphellum</i> , Torr. (78)  | <i>Potentilla</i> <sup>p-79</sup> <i>Canadensis</i> , L. (77)   |
| <i>Aquilegia</i> <sup>p-71</sup> <i>Canadensis</i> , L. (73)    | <i>Ranunculus</i> <sup>p-79</sup> <i>foeniculatus</i> , Muhl.   |
| <i>Barbarea</i> <sup>p-74</sup> <i>praecox</i> , R. Br.         | <i>Ranunculus</i> <sup>p-79</sup> <i>abortivus</i> , L.         |
| <i>Capsella</i> <sup>p-68</sup> <i>Bursa-pastoris</i> , Moench  | <i>Saxifraga</i> <sup>p-72</sup> <i>Virginiana</i> , Mx         |
| <i>Claytonia</i> <sup>p-78</sup> <i>Virginica</i> , L.          | <i>Stellaria</i> <sup>p-69</sup> <i>media</i> , Smith,          |
| <i>Cornus</i> <sup>p-78</sup> <i>Canadensis</i> , L. (76)       | <i>Stellaria</i> <sup>p-74</sup> <i>pubera</i> , Muhl.          |
| <i>Corydalis</i> <i>flamula</i> , D. C.                         | <i>Sarcocolla</i> <sup>p-69</sup> <i>officinalis</i> , DC. (81) |
| <i>Dentaria</i> <i>heterophylla</i> , Nutt.                     | <i>Sisymbrium</i> <sup>p-69</sup> <i>Thaliana</i> , Gand        |
| <i>Dentaria</i> <sup>p-72</sup> <i>laciniata</i> , Muhl.        | <i>Thalictrum</i> <i>divicium</i> , L.                          |
| <i>Equisetum</i> <sup>p-71</sup> <i>arvense</i> , L.            | <i>Parosacum</i> <sup>p-69</sup> <i>officinale</i> , Weber.     |
| <i>Erythronium</i> <sup>p-68</sup> <i>Americanum</i> , Ker.     | <i>Urtica</i> <sup>p-71</sup> <i>perfoliata</i> , L. (74)       |
| <i>Fragaria</i> <sup>p-71</sup> <i>vesca</i> , L.               | <i>Viola</i> <sup>p-69</sup> <i>cucullata</i> , Gray.           |
| <i>Geranium</i> <sup>p-69</sup> <i>maculatum</i> , L. (84)      | <i>Viola</i> <sup>p-69</sup> <i>pedata</i> , L.                 |
| <i>Houstonia</i> <sup>p-72</sup> <i>caerulea</i> , L.           | <i>Viola</i> <sup>p-69</sup> <i>bicolor</i> , Pursh             |
| <i>Hepatica</i> <sup>p-68</sup> <i>triloba</i> , Chais.         | <i>Viola</i> (tenella) <i>tricolor</i> var. <i>arvensis</i>     |
| <i>Helonias</i> <i>bullata</i> , L.                             | <i>Viola</i> <sup>p-72</sup> <i>ovata</i> (83)                  |
| <i>Liriodendron</i> <i>Benzoni</i> , Blume                      | <i>Viola</i> <sup>p-69</sup> <i>scaberrima</i> , Fx B. (82)     |
| <i>Luzula</i> <i>compacta</i> , D. C.                           | <i>Lamium</i> <sup>p-69</sup> <i>amplexicaule</i> , L. (79)     |
| <i>Luzula</i> <sup>p-72</sup> <i>vernalis</i> , D. C.           | <i>Sanguinaria</i> <sup>p-69</sup> <i>Canadensis</i> , L.       |
| <i>Chrysanthemum</i> <i>Americanum</i> , Schum.                 | <i>Epigaea</i> <sup>p-69</sup> <i>repens</i> , L.               |
|   | <i>Dracopis</i> <i>acutellata</i> , D. C.                       |

III  
*Erica palustris*, L.

Plants 58.

I observed that bees are fond of the flowers of the Amelanchier. No doubt they collect honey, the flower smell sweet.

May

- 1 Collected to-day at Clifton Park puthalli on the rocks in the green house. Made the acquaintance of Mr. H. Voche who lives on 25<sup>th</sup> St #103 near St. Paul., a great cactus enthusiast.
- 2 Mr. Russell and I visited the little marsh near the mansion on the Pratt estate. Here we found *Caltha palustris*. Here, too, grow *Veratrum viride* in great profusion, also, *Anemone nemorosa*, *Oenanthe aculeifolia*, *Erythronium Americanum*, *Chrysopsis Americanum*, etc. etc. The best way of getting to the swamp is to get off at Woodhouse Av., go east to a private way at the end of a stone wall. (This way although inside of fence, connects Woodhouse & Arlington Ave.). Go south along this private lane to the first lane leading east and follow it to the little run which leads to the marshy ground. It can also be reached by following Woodhouse Av. to the brook, this leads through the Pratt estate and to the marshy ground and if followed passes Willen Rd. Plants in bloom.

*Ranunculus recurvatus*, Poir. (86)

<sup>p-71</sup>  
*Cardamine hirsutoides*, D. C. (87)

<sup>p-69</sup>  
*Viola primulaefolia*, L. (85)

<sup>p-68</sup>  
*Amelanchier Canadensis* var. *oblongifolia*, T. & G. (89)

<sup>p-72</sup>  
*Caltha palustris*, L. (88)

The *Erythronium* were quite large and one might think they were of a different species.

- 3 In the rear of Helmer's little shanty<sup>1</sup> — I marked an *Amelanchier* var. *oblongifolia* for further study. I noted that this species is quite common near the pond.

In the swampy ground near the rear shanty grows a very pretty *Carex*. Found it also along the R. R. track near the rifle range. *Viola primulaefolia* is already in bloom, but there are no trace as yet of *V. lanceolata*. The violet most common is *V. ovata*. It was found all along the railroad and also along the Marshy Rd. on my way to Curtis Bay. In the rear of Charlie Heimer's home live the old negro with the mal-formed hand, passing his little shanty is a small path leading to the tile factory. Along this path, I found

Myrica asplenifolia. Here it was in full bloom, whereas near the pond it was already done blooming.

My trip to-day was mainly to visit my Helonias locality beyond Forest Home. For some reason I had really forgotten the exact spot and was for a little while on the wrong track entirely, but it suddenly came to my mind and I found it without further trouble. It is beyond the dam and beyond that beautiful plant of Saxa cerni purpurea. The plants are now in full bloom. Seeing so many I began counting them. I counted 322 when seeing so many of them before me I became confused and gave it up; there were no doubt more than 400 plants in bloom, perhaps more than 500. I dug up several of the plants. I find that occasionally there is a scar showing where a former leaf-stalk had been. A short distance beyond this scar the root terminated, the rest of it having rotted away. The blooming plants had attached to them one, two, three, and sometimes four shoots. From the appearance of the flowerless plants it would seem that the shoots must in every case become several years old and finally separate from the parent rootstock before they come to a blooming size. To study this question I marked a number of plants and will await developments. Maianthemum grows here in profusion, and so also Oxalis spiralis. On my way home, I looked out for Viola Atlantica. I found a number of them near the stream on the west side of the road.

I heard to-day, the Bob-white for the first time. I observed, too, that the pretty bird, observed on a former occasion (v. p. 1105) (Tampa) is the one that calls Tir-wee. Near the pond, two <sup>toads</sup> frogs attracted my attention. They were no doubt male & female. The smaller one the female was on the back of the much larger male, <sup>had her</sup> clasped firmly, with his fore-legs and was dragged along by her when she moved.

#### Plants in bloom.

<sup>p-72</sup>  
Amelanchier Canadensis, D. & G.  
A. Can. var. oblongifolia, D. & G.  
Antennaria plantaginifolia, Hook.  
Anemone nemorosa, L.  
<sup>p-74</sup>  
Barbarea vulgaris, R. Br.  
<sup>p-71</sup>  
Leucandra calyculata, Da.

<sup>p-78</sup>  
Capelle Burrastoria, Munch.  
Cerastium vulgatum, L. (95).  
Draba verna, L.  
<sup>p-74</sup>  
Epigaea repens, L.  
Euphorbia speciosa, L.  
<sup>p-74</sup>  
Fragaria vesca, L.  
Helonias bellota, L.

<sup>p-77</sup>  
*Houstonia missouriensis*, L.  
<sup>p-71</sup>  
*Mir. verna*, L. (94)  
<sup>p-71</sup>  
*Knigza Virginica*, Willd. (92)  
<sup>p-79</sup>  
*Lamium amplexicaule*, L.  
<sup>p-79</sup>  
*Lithospermum arvense*, L.  
*Myrica asplenifolia*, Endl. (93)  
*Okenia acutifolia*, Watson.  
<sup>p-81</sup>  
*Orontium aquaticum*, L.  
<sup>p-79</sup>  
*Potentilla Canadensis*, L.  
<sup>p-71</sup>  
*Saccap. officinale*, Nuss.

*Ribes aureum*, (97)  
<sup>p-77</sup>  
*Sisymbrium Thaberna*, Sand.  
<sup>p-79</sup>  
*Stellaria media*, Smith  
<sup>p-79</sup>  
*Taraxacum officinale*, Weber.  
<sup>p-79</sup>  
*Viola cucullata*, Gray.  
*Viola ovata*  
*Viola pedata*, L.  
<sup>p-75</sup>  
*Viola prunicefolia*, L. (90½)  
*Veronica arvensis*, L. (91)  
*Vaccinium corymbosum*, L. (90)  
<sup>p-81</sup>  
*Viola Atlantica* (96) Plants St.

I find on the Alder white insects similar to those found in the autumn. *Ribes aureum* is now in flower

May 4 Plants in bloom (Brought by girl to W.F.H.)

*Chelidonium majus*, L. (98) *Silene Pennsylvanica*, Mx. (99)  
*Ornithogallum montana*, L. (100) *Valerianella olitoria*, Poll. (101)

5 Plants in bloom.

*Veronica campetris*, L. (102) *Muncaria botryoides*, Mill. (103)

6 Along the hillside on the left bank of Herring Run grow innumerable violets - *V. pedata* and *V. bicolor*. On the summit of hill, I found what may possibly prove to be a specimen of *V. sagittata*. It may be well worth going over this route later in the spring and in the summer, and examine the ferns in the lowland. I found one, which may only prove to be *Onoclea sensibilis*, but which looked quite strange.

Plants in bloom.

<sup>p-78</sup>  
*Chelidonium majus*, L.  
<sup>p-71</sup>  
*Silene Pennsylvanica*, Mx.  
*Veronica arvensis*, L.  
*Veronica pinguis*, L. (102) *Valerianella olitoria*, Poll.  
<sup>p-72</sup>  
*Viola bicolor*, Pursh  
<sup>p-72</sup>  
*Viola pedata*, L.  
<sup>p-74</sup>  
*Viola ovata*  
<sup>ata</sup>  
*Viola sagittata* (103)

7 To-day, I found *Viola lanceolata* in bloom. On Tuesday, it was not blooming, it, therefore comes a little later than *Viola prunicefolia*. The little oak, *Quercus prinoides* was found in bloom. (See Hill Pond)

Afternoon. Took the route along Fox Run, hoping to take a look

at the Lilium Philadelphicum near the old fallen tree-trunk but failed to find the tree-trunk, must have made a mistake in the route. On this route, I passed some Utricularia perfoliata plants. At one spot, where the plants were very plentiful was also a large patch of Pyrola rotundifolia. Two marked trees are on the path, one on each side. Here, too, look to the right and another marked tree will be seen and still farther to the right another. At this spot, near some rocks is a large patch of Aplectrum humile.

Obolaria is now in full bloom. While digging up some specimen of the Utricularia perfoliata, I observed that underground were also creeping stems. These stems one or two to the plant were long & slender and scaly. The scales being some distance apart. When I reached the ravine, I visited the Egeria hyemalis. I hoped to find fertile shoots, but there were none. I then went along the hillside, keeping a sharp look-out for the spot where I had marked the position of a specimen of Cypripedium pubescens. I found it without difficulty and was greatly surprised to find already a plant in full bloom. This is the earliest I have recorded its bloom. As I left the ravine I found a single plant of Orchis spectabilis.

When I reached the River Rd I visited the Eleocharis <sup>v-77</sup> parvicaulis. It was in bloom. Near the bend, where there is a close approach of the river to the road, I find the hillside almost covered with the plant. I visited also my Psyllium grandiflorum spot. The plant is in full bloom. In one specimen I find the flower already faded.

When I returned to the ravine, I looked out for more specimens of the Cypripedium. I entered the ravine from over the hill on the east side. Here all along the railroad grows Silene Pennsylvanica in the greatest profusion. On the top of the hill, I found a single specimen of Lithospermum canescens. When close to the cascades I found two plants of Cypripedium pubescens in bloom. I took one of the plants. Marked the position of the other by marking the tree and by plunging two

strike in the ground near the spring, Mr. R. tells me that up on the top of this hill (near the cascade) grow innumerable specimens of Viola bicolor. I shall look.

Solanum concolor is still not in bloom.

Plants in bloom.

*Arenaria corymbifolia*, L. (104)  
p-78

*Arabis nudicaulis*, L. (105½)  
p-72

*Aquilegia Canadensis*, L.  
p-74

*Cardamine hirsuta*, L. (120)  
p-74

*Cardamine hirsutifolia*, D.C. 120.

*Cornus florida*, L. (111)  
p-72

*Cassandra calyculata*, Dm.  
p-75

*Celtis occidentalis*, L. (110)  
p-78

*Flourensia procumbens*, Willd. (117)  
p-78

*Geranium maculatum*, L.  
p-74

*Erythronium Americanum*, Kr.  
p-72

*Cypripedium pubescens*, Willd. (105)

*Vaccinium corymbosum*, L. (109)  
p-75

*Obolaria Virginica*, L.  
p-72

*Viola blanda*, Willd. (115)

*Iris verna*, L.  
p-81

*Knizia Virginica*, Willd.

*Lithospermum canescens*, Lhm. (113)

*Morus rubra*, L. (112)  
p-76

*Podophyllum peltatum*, L. (114)  
p-74

*Orchis spectabilis*, L. (106.)  
p-74

*Mutenia Virginica*, D.C. (118)

*Quercus prinoides*, Willd. (107)  
p-74

*Silene Pennsylvanica*, Mx.

*Sassafras officinale*, Mx.  
p-75

*Utricularia perfoliata*, L.

*Viola lanceolata*, L. (108)

*Viola palmata*, L. (116)

*Zizia cordata*, D.C. (120½)  
p-79

*Zizia aurea*, Koch (120½)  
p-79

*Rhododendron nudiflorum*, Fr. (119½)  
p-79

May 8. Visited the spring at Owl Camp for the purpose of seeing if the *Cypripedium pubescens* was in bloom. One only, on the hill side opposite the spring was in flower. The one near the spring, was in bud. At the spot, close to the steep hill, were 3 plants, none of which were blooming. On the hillside, close to the broad path, I observed the 3 marked spots. At rock No. 1. was one plant in bloom; at No. 2. close to the tree with marks (105) were 3 plants, none in bloom; at No. 3. was one plant, not in bloom. I also examined the transplanted Willows and Veronica Bartramii. They looked flourishing.

Plants in bloom.

*Hypoxis erecta*, L. (121)  
p-75

*Cercis Canadensis*, L.  
p-72

*Staphylea trifolia*, L. (122)  
p-72

*Vaccinium corymbosum*, L.

*Vaccinium vacillans*, Schander. (123)  
p-79

May 10<sup>th</sup> I visited the Saxifraga Pennsylvanica just a short distance from the station at Albion. Most of the plants were not in bloom. It seems as if the plant is spreading. Not far from this spot is a place where the railroad road built a stone wall. Looking up the hillside, one sees Stem Cabbage in profusion, but what attracted my attention particularly were several large patches of Maianthemum, almost in bloom. I climbed the hillside to see them and was most agreeably surprised to find several fine large patches of Caltha palustris. Here, too, I found Trillium cernuum, & Veratrum viride in bloom.

I stopped at Union Dam tunnel to see the Cypripedium. I find most of the plants close to the tunnel, two were found in bloom, the others that were in bud showed color. Plants in bloom.

Anemone Canadensis, F. & S.

<sup>p-74</sup>  
Asplenium Canadense, L.

Caltha palustris, L.

Chrysosplenium Americanum, Schreb.

<sup>p-18</sup>  
Cercis Canadensis, L.

<sup>p-18</sup>  
Cypripedium pubescens, Willd.

<sup>p-78</sup>  
Equisetum arvense, L.

Hepatica triloba, Thunb.

<sup>p-79</sup>  
Lepidium campestre, Br. (135)

<sup>p-79</sup>  
Osmunda cinnamomea, L. (133)

<sup>p-79</sup>  
Osmunda Claytoniana, L. (124)

Panlownia imperialis, Sib. & Zucc. (125)

Platanus occidentalis, L. (134)

<sup>p-71</sup>  
Poa pratensis, L. (130)

<sup>p-73</sup>  
Polygonum reptans, L. (128)

<sup>p-79</sup>  
Rumex acetosella, L. (126)

Saxifraga Pennsylvanica, L. (127)

<sup>p-74</sup>  
Saxifraga Virginiana, Mss.

<sup>p-79</sup>  
Senecio aureus, L. (127)

Staphylea trifolia, L.

<sup>p-73</sup>  
Trillium cernuum, L. (131)

Vaccinium corymbosum, L.

<sup>p-73</sup>  
Veratrum viride, Ait. (132)

<sup>p-74</sup>  
Viola blanda, Willd.

<sup>p-75</sup>  
Viola bicolor, Pursh.

<sup>p-74</sup>  
Viola pedata, L.

Viola scaberrima, F. & S.

This present year seems to be a "Violet" year. I do not recollect ever seeing them so plentiful and so beautiful. On the hillside near Davis's, also near Dorsey's Run and Albion, were hundreds of plants of Viola bicolor and V. pedata, all gorgeously large.

In the little ravine beyond Dorsey's Run. I found a large patch of a fragrant Labiate, which may prove to be a species of Monarda. Beyond the tunnel, going homeward, I passed a very large patch of Equisetum hyemale. New stalks were coming up, and I had a chance

\* Mr. W. found it in bloom at Chelms.

of seeing the blackish teeth. Already most of them had fallen off although the stalks were hardly out of the ground, and were but a few inches in height.

- May 12. Plants in bloom
- |  |  |
|--|--|
| <sup>p-78</sup><br><i>Anthoxanthum odoratum</i> , L. (136) | <i>Dactylis glomerata</i> , L. (137)                     |
| <sup>p-74</sup><br><i>Cardamine hirsuta</i> , L.           | <sup>p-74</sup><br><i>Medicago lupulina</i> , L. (139)   |
| <sup>p-74</sup><br><i>Cardamine rhomboidea</i> , D.C.      | <sup>p-74</sup><br><i>Plantago Virginica</i> , L. (143)  |
| <sup>p-78</sup><br><i>Fagus purpuraria</i> , Ait. (138.)   | <sup>p-79</sup><br><i>Polemonium reptans</i> , L.        |
| <i>Galium aparine</i> , L. (142.)                          | <sup>p-79</sup><br><i>Ranunculus bulbosus</i> , L. (140) |
|  | <i>Vicia sativa</i> , L. (141)                           |
- The Papaw is not yet in bloom.
- 13 Plants in bloom.
- |  |  |
|--|--|
| <sup>(148)</sup><br><i>Carpinus Caroliniana</i> , Michx.     | <i>Prunus Virginiana</i> , L. (144)  |
| <sup>p-75</sup><br><i>Lamium purpureum</i> , L. (150)        | <sup>p-79</sup><br><i>Ranunculus recurvatus</i> , Poir (149)                               |
| <sup>p-75</sup><br><i>Maianthemum Canadense</i> , Duf. (146) | <sup>p-74</sup><br><i>Trilium cernuum</i> , L.   |
| <sup>p-75</sup><br><i>Medeola Virginiana</i> , L. (147)      | <i>Veratrum viride</i> , Ait   |
|  | <sup>p-74</sup><br><i>Viola canina</i> var. <i>Muhlenbergii</i> , Gray. (145)<br>v. below. |
- 14 I learned to-day the best way to reach the Veronica hederaefolia spot. Instead of turning into the Cranwell Bridge Rd, continue on out the Providence Rd until you enter the wood, then turn to the left and follow the path, pass the "No throughfare" sign. The Veronica grows on the bank of a little brook. I found it in bloom. All of the plants had still the two cotyledons, showing that they had grown since spring. In this same woods, I found more than a dozen specimens of Orelin spectabilis. Close to the Veronica is a piece of low land almost overgrown with Egagropilum arvense. I now return to the road and continued on out the Providence Rd. I soon reached the path leading through the Cyperipedium acule woods. I counted 37 plants in bloom. One specimen had four plants from one root and had four flowers. There were a great many with two plants from the same root. I looked for the Polygonia verticillata but it was not in bloom. Several specimens of the Veronica were taken and transplanted in my favorite ravine, on the left bank of the first tributary below the little meadow. The spot chosen was near a tree which I marked right at the bend in the stream and but a few yards, possibly (15) from the main brook.

I searched carefully for OphioGLOSSUM but failed to find a single plant. Trillium cernuum was found; it is not over abundant. Viola canina is found not far from the last culvert before reaching the 3-arched bridge. On the hillside facing Glen Ellen grow a great many plants of Viola pedata.

The rocks to day, beyond Glen Ellen were beautifully decorated with Columbine. Cynoglossum officinale, L. will soon be in bloom.

### Plants in bloom

<sup>p-78</sup>  
Aquilegia Canadensis, L.  
<sup>p-78</sup>  
\* Barbarea vulgaris, R. Br.  
Barbarea praeux, R. Br.  
<sup>p-78</sup>  
Cardamine hirsuta, L.  
<sup>p-78</sup>  
Cardamine rhomboides, D. C.  
<sup>p-78</sup>  
\* Arabis lyrata, L.  
Arabis laevigata, Torr. (152)  
Cerastium nutans, Raf. (156)  
<sup>p-81</sup>  
Epizoa repens, L.  
Erythronium Americanum, Ker.  
Fraxinus Americana, L. (157)  
<sup>p-75</sup>  
Fragaria Virginiana, Mill. (155)  
<sup>p-74</sup>  
Fragaria vesca, L.  
Geranium verum, R. & S. (154)

Mertensia Virginia, D. C.  
<sup>p-75</sup>  
Orchis spectabilis, L.  
<sup>p-75</sup>  
Polemonium reptans, L. Pennisetum, Det.  
<sup>p-79</sup>  
Plantago Virginia, L.  
<sup>p-81</sup>  
Cypripedium acaule, (Wt. (151))  
Carlophyllum thalictroides, Mx. (159)  
<sup>p-79</sup>  
Saxifraga Virginiana, Mx.  
Trillium cernuum, L.  
<sup>p-79</sup>  
Viola canina, var. Muhlbergii, Gray.  
Veronica hedraefolia, L. (153)  
<sup>p-79</sup>  
Viburnum prunifolium, L. (158)  
<sup>p-79</sup>  
Vicia minor,  
<sup>p-75</sup>  
Viola pedata, L.  
Viola ovata,  
<sup>p-79</sup>  
Viola blanda, Willd.

Quercus alba, L. (160)  
Quercus prinus, L. (161)  
Quercus cocinea, Wang. (162)  
Salix fragilis, L. (163)

The oaks are now in full bloom. Found to day the last Erythronium and the last Epizoa.  
Morus rubra, L. (164)

### May 15 Plants in bloom

Ranunculus acris, L. (164)

(165, 166, vide p. 71, also 167.)

Veronica Buxbaumii, Tenore. (168)

- 17 Trip to Brooklyn. I visited the spots where I had transplanted Veronica Buxbaumii. I found <sup>two of</sup> the places, Nos. 1 & 2. At spot No. 1. the plant was not doing well, it is entirely too shady. At spot No. 2, however, it was looking well. I then visited the spot where I had marked

the position of some Symphlocarpus seeds (in the <sup>blind plain</sup> meadow, near the fallen tree-trunk), of the 10 seeds, one had started to germinate. I visited also the spot beyond the ravine, here, too, I found but one germinated.

Orchis spectabilis is fairly plentiful in the ravine, more than 12 plants were counted. Here, too, I found a nice patch of Urtica and also one of Urtica perfoliata. Only three plants of the latter were still in bloom.

#### Plants in bloom.

<sup>p-78</sup>  
Broussonetia papyrifera, Vent. (169)

<sup>p-78</sup>  
Celtis occidentalis, L.

<sup>p-78</sup>  
Hypoxis erecta, L.

<sup>p-79</sup>  
Maruta Cotula, D.C. (179)

<sup>p-79</sup>  
Orchis spectabilis, L.

<sup>p-79</sup>  
Orchis stricta, Sw. (176)

<sup>p-79</sup>  
Orchis violacea, L. (177)

<sup>p-79</sup>  
Plantago lanceolata, L. (180)

Prunus serotina, Ehrh. (178)

Afternoon. To Roxton.

Made the trip to search for find it, however.

#### Plants in bloom

<sup>p-78</sup>  
Aepia officinalis, L. (181)

Camelina sativa, Crantz (184)

On the little hillside, between the railroad and the country road beyond Lake station I found several plants of Valerianella Field Club.

At 5 o'clock, I attended the meeting of the Field Club. Dr. Andrews brought a few interesting notes before the Club. He gave an interesting account of a cat getting through an opening  $2\frac{1}{4}$  inches wide. The skull of the cat is  $1\frac{3}{4}$  in. in height. It would seem then that a cat is able to get its body through any opening, through which it is able to get its head. He gave an account of some box turtles which he has in his yard. What was most interesting was the length of time that they hibernated, about 7 months.

Prunus nigra, Ait. (170)

<sup>p-79</sup>  
Polygonatum biflorum, Ell. (171)

Rubus occidentalis, L. (174)

<sup>p-76</sup>  
Rubus Canadensis, L. (175)

<sup>p-79</sup>  
Smilax herbacea, L. (173)

<sup>p-79</sup>  
Smilacina racemosa, Desf. (172)

Urtica perfoliata, L.

<sup>p-79</sup>  
Viola pedata, L.

<sup>p-79</sup>  
Viola parvulaefolia, L.

<sup>p-79</sup>  
Viola hector, Pursh

<sup>p-83</sup>  
Medeola Virginiana, L.

<sup>p-81</sup>  
Maianthemum Canadense, Desf.


Equisetum sylvaticum. Failed to

<sup>p-76</sup>  
Veronica straminea, L. (186)

<sup>p-78</sup>  
Veronica Americana, L. (182)

<sup>(Baccharis Symplocaria)</sup>  
Sinapis arvensis, L. (185)

Berberis vulgaris, L. (183)

of the year was the average,  $6\frac{1}{2}$  months being the least number and  $7\frac{1}{2}$  months the greatest. He showed us some photographs of a crayfish with young. The little ones have a natural tendency of crawling up on one another, and it is this tendency which prevents them from getting lost and keeps them under the mother and in her protection. When they first come out of the egg they are very weak and would at this time certainly get away from the mother but for a peculiar arrangement. The first covering of the young is attached by means of a thread or threads to the inside of the egg shell. When this covering is shed, which it is soon after the young crayfish emerges from the shell, it remains attached to the end of the tail by means of peculiar hooks which interlock . Before the second coat is shed, which would really separate them from the egg they have attained enough strength and their tendency of crawling then keeps them close together. His experiment with a wild brown rat and a tame white one was most interesting. He has never succeeded in getting a wild female and a tame male to mate. But with a tame female and a wild male he has been most successful. Strange to say, however, the young all take after their father both in wildness and in color, being only slightly paler on the belly. When these young were mated the result was peculiar, in the latter were, a very black one (not brown), a white one like the grandmother and several black & white ones, none being like the grandfather. He showed us a peculiar land crab that had been picked up in the street. These crabs are said to live in the mountains but make a trip once a year to the ocean.

May 19.

Plants in bloom

<i>Corydalis Virginiana</i> , L. (187)	<i>Rubus Canadensis</i> , L. <sup>p-79</sup>
<i>Comandra umbellata</i> , Nutt (188)	<i>Sisymbrium officinale</i> , Scop. (189)
<i>Geranium Carolinianum</i> , L. (190) <sup>p-83</sup>	<i>Vaccinium ataminum</i> , L. <sup>p-79</sup>

*Eunympha* is not yet in bloom.

20

Plants in bloom.

<i>Eriogonum bellidifolium</i> , Muhl. (195) <sup>p-78</sup>	<i>Syringa arbutifolia</i> var <i>melanocarpa</i> , Hook (200) <sup>p-79</sup>
<i>Hieracium venosum</i> , L. (198) <sup>p-79</sup>	<i>Podophyllum peltatum</i> , L. <sup>p-81</sup>
<i>Nepica erifera</i> , L. (197) <sup>p-83</sup>	<i>Leucostoe coccinea</i> , Gray (190)
	<i>Ornithogalum umbellatum</i> , L. (191) <sup>p-79</sup>

*Trifolium repens*, L. (111) *Myrica sylvatica*, Marsh. (113)

*Silene* <sup>p-79</sup> *lyrata*, L. (192) *Smilax* <sup>p-79</sup> *glauca*, Walt. (194)

*Smilax racemosa* in full bloom. The woods were full of it

May 21 I had some difficulty finding the path leading from Rolling Rd to the old Pump House. I thought at first that it was the one immediately opposite the Old Fredericks Rd, but, soon learned that I was mistaken. It is the first one north of the road. I find that I can reach the old Pump House in less than an hour. I crossed the brook at once and proceeded along the east bank of the river. The first thing that attracted my attention was the finding of *Cerastium arvense* on the rocks on the opposite side of Brook at the Pumping station. Next I was quite pleased to find the *Paper* so abundant and in full bloom, and the ground lightly carpeted with *Floukea procumbens*. It was still in bloom. Best of all, to-day, was my new find. For years I have been looking for *Arisaema Dracontium*. Whenever I came across an odd-looking Jack-in-the-pulpit, I would at once think of the *Arisaema Dracontium*. You can, therefore, imagine my joy in finding it to-day, not one or two plants, only but hundreds of them. When I found my first plant, I thought, at first, that I had found a premier Jack, but soon saw that it was really *A. Dracontium*. It is not yet in bloom.

After passing the "Shades of Death" I was close to the spot where *Asplenium angustifolium* grows. So many changes have taken place since last year that at first I did not recognize the spot. After a little search, I found it, very close to the path that you name the "Shades of Death." I was very sorry, though, to find that all the trees on the hillside, and all around the fern had been cut down. It looks thifty still, however, and possibly no harm has been done. However, I dug out a nice clump and planted it down stream further also a smaller one, which I took with me to the same place where I planted it not far from the culvert, on the left bank of the brook. A witch hazel stands close by. I marked

the spot by placing a coiled-up newspaper at the base of the shrub and by plunging a stick in the ground where the fern was planted. I visited the hillside at the Union Dam tunnel. Here I counted more than 60 *Cypripedium pubescens* plants, all in full bloom. When I entered the ravine, I at once planted the fern. I then looked for the *Cypripedium* near the marked tree. I found it easily and also another a short distance farther north close to a double-oak. *Orchis spectabilis* was found quite frequently. A spot where two very pretty specimens were growing was marked, close to a water beech, close to the junction of the very first brooklet and the brook. Others were also found in the path on the right bank.

I now set out to find several marked spots, where the *Aplectrum* was observed. I found three of these spots. I find that the floral shoot is just showing itself. In a week's time the plant will be in bloom. The white squarish thread-like roots of the *Erythronium* were also observed. I shall examine them more closely in the near future.

#### Plants in bloom

*Aquilegia Canadensis*, L.  
*Arabis lyrata*, L.  
*Anthracanthus odoratum*, L.  
*Arabis nudicaulis*, L.  
*Micrantha triphyllum*, Torr. & Gray.  
*Amorpha fruticosa*, L.  
*Amorpha Canadensis*, L.  
*Asparagus officinalis*, L.  
*Asimina triloba*, Dunal (201)  
*Barbarea vulgaris*, R. Br.  
*Cardamine hirsuta*, L.  
*Cardamine rhomboides*, D. C.  
*Cypripedium pubescens*, Willd.  
*Cypripedium parviflorum*, Salisb. (210)  
*Cerastium arvense*, L. (204)  
*Chrysanthemum leucanthemum*, L. (215)

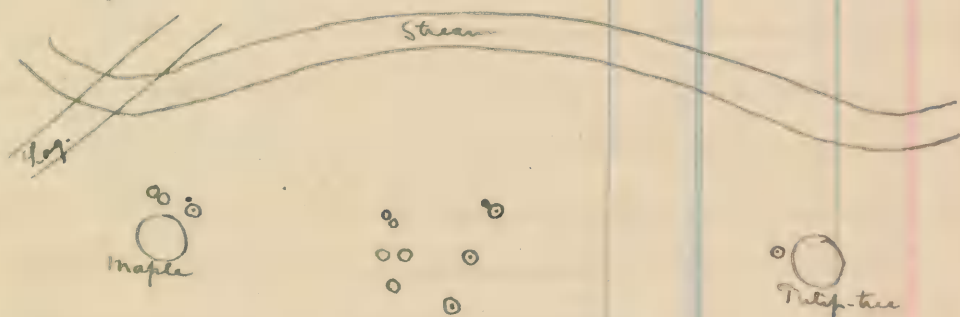
*Celtis occidentalis*, L.  
*Cornus Canadensis*, L.  
*Cornus florida*, L.  
*Chelidonium majus*, L.  
*Capsella Bursa-pastoris*, W. & A. (211)  
*Claytonia Virginica*, L.  
*Daucum Carota*, L. (211)  
*Equisetum arvense*, L.  
*Eryngium bellidifolium*, Willd.  
*Fragaria vesca*, L.  
*Fragaria Virginica*, Willd.  
*Berula officinalis*, L.  
*Floerkea procerpinaster*, Willd.  
*Leranthium maculatum*, L.  
*Salvia Apocynum*, L.  
*Hyssopus erectus*, L.  
*Hieracium Americanum*, L.

- Heiacum venosum*, L.  
*Houstonia caerulea*, L.  
*Hydrophyllum Virginicum*, L. (207)  
*Juglans cinerea*, L. (205)  
*Juglans nigra*, L. (206)  
*Lamium amplexicaule*, L.  
*Lepidium campetris*, Br.  
*Lithospermum arvense*, L.  
*Mitella diphylla*, L.  
*Myosotis verna*, Nutt. (214)  
*Nepeta Glehoma*, Benth.  
*Maruta Cotula*, D. C.  
*Oxalis spectabilis*, L.  
*Oxalis stricta*, Sam.  
*Oxalis violacea*, L.  
*Oenothera cinamomea*, L.  
*Oenothera Claytoniana*, L.  
*Oenothera umbellatum*, L.  
*Oenothera brevistylis*, D. C. (203)  
*Polygala Senega*, L. (209)  
*Polygonatum biflorum*, Ell.  
*Podophyllum peltatum*, L.  
*Potentilla Canadensis*, L.  
*Plantago Virginica*, L.  
*Poa pratensis*, L.  
*Viola blanda*, Willd.  
*Vicia minor*, —  
*Viburnum prunifolium*, L.  
*Vaccinium* <sup>p-83</sup> *stamineum*, L.  
*Vaccinium vacillans*, Sutherland.  
*Vicia cordata*, D. C.  
*Vicia aurea*, Koch.  
*Plantago lanceolata*, L.  
*Rumex Acetosella*, L.  
*Ranunculus abortivus*, L.  
*Ranunculus fascicularis*, Mull.  
*Ranunculus recurvatus*, Poir.  
*Ranunculus bulbosus*, L.  
*Rubus Canadensis*, L.  
*Rhododendron nudiflorum*, Tor.  
*Sanicula Marylandica*, L. — (213)  
*Stellaria media*, Smith.  
*Stellaria pubera*, Mx.  
*Senecio aureus*, L.  
*Salvia lyrata*, L.  
*Saxifraga Virginiana*, Mx.  
*Smilax hibernica*, L.  
*Smilax glauca*, Walt.  
*Sisymbrium Thabaria*, Gand.  
*Smilacina racemosa*, Desf.  
*Silene Pennsylvanica*, Mx.  
*Parasacum officinale*, Weber.  
*Tradescantia Virginica*, L. (212)  
*Trifolium repens*, L.  
*Trifolium pratense*, L. (208)  
*Viola blanda pinnatifolia*, L.  
*Viola canina* var *Muhlenbergii*, Gray.  
*Viola cucullata*, Gray.  
*Viola pedata*, L.  
*Viola bicolor*, Pursh.  
*Thaspium thaspium*, C. & R. (202)

Plants 93.

I find *Dica palustris* fairly laden with fruit. I see now why I always overlooked it. The berries are well hidden under the foliage. The *Prunus*-tree will soon be in flower. In the same locality where I found the *Anisema Dracunculium*, I found plants also of *Dicentra* and of *Corydalis*. The latter was very abundant.

May 24 To-day, I took the early train to Lebanon. Owing to a wreck in the road, we were delayed about 35 minutes. Arrived at L., I went in the direction of Mauley, and from there to Forest Home and the Helonias region. The Sarracenia is now in bloom. On my way to the Helonias place I stopped a few moments to examine the large specimen discovered two years ago. The plant has more than 50 pitchers and this year it will have 6 flowers. Helonias is now going to seed. It has attained its full height, some specimens were more than 4 ft. high. One particularly good spot was marked for study, and the following map made of it.



Distance between trees about 5 ft., both were marked, and near the base of the maple I put a copper wire. Helonias plants marked  $\odot$  were in fruit. It was while on my way to this region that I passed a large Cypripedium acaule plant containing 5 blooms.

I returned to F. H. and then took the road to Elberton passing the Lygodium spot. Here as an experiment I removed the terminal undeveloped portion of the frond of quite a number of specimens. I passed through Warfield's, Ward's, and finally arrived at Elberton. Not far from Ward's I passed a spot with quite a lot of Ornithogallum umbellatum in bloom. From E. I proceeded to Waterford. On this road I located a new and fine spring beyond the negro chauty on the right side of path. From Waterford, I went to Arnegie's. On this part of my trip I counted more than 100 C. acaule in bloom. At A. I met Mr. Danner, and here I was invited to ride to the wharf at Stony Run, which I did. The steamer leaves the wharf at 4.30 P.M. The trip home by boat was most delightful, after the tramp of <sup>more</sup> than 9 miles. I arrived in the city about 6.30 P.M. and home by 7.

Plants in bloom.<sup>p-83</sup>  
*Cypripedium acaule*, Ait.*Epigaea repens*, L.*Iris versicolor*, L.<sup>p-83</sup>  
*Kalmia angustifolia*, L. (222)<sup>p-83</sup>  
*Leucothoe racemosa*, Gay.<sup>p-83</sup>  
*Linaria Canadensis*, Dumort (218)*Lepidium Virginicum*, L. (217)*Lupinus perennis*, L. (216)*Viola Atlantica*.*Viburnum cassinoides*, L. (228)*Malva rotundifolia*, L. (227)*Maianthemum Canadense*, Duf.<sup>p-83</sup>  
*Magnolia glauca*, L. (225)*Ostrya agrifolia*, L.*Pyrus arbutifolia*, L. f. (221)*Oenothera linaria*, Watson. (220)<sup>p-83</sup>  
*Krizia Virginica*, Willd.*Rumex lanceolatus crispus*, L. (223)<sup>p-83</sup>  
*Robinia Pseudacacia*, L. (226)*Sarracenia purpurea*, L. (219)*Smilax rotundifolia*, L. (224)May 26 Plants in bloom.*Rhus toxicodendron*, L. (229) *Cataegus Cus-galli*, L. (230)27 Plants in bloom.*Aphyllon uniflorum*, Gay (229) *Claytonia Virginica*, L.*Celastrus scandens*, L. (232) *Dicentra villosa*, L. (230)*Chorizanthe Virginica*, L. (233) <sup>p-85</sup>  
*Viburnum acerifolium*, L. (234)*Cornus alternifolia*, L. f. (231) <sup>p-85</sup>  
*Gillenia trifoliata*, Munch. (235)

It is interesting to observe the apple-tree near the bridge at Dickeyville. It is a tree that was grafted. The place of union shows plainly. The grafted part is of less diameter than the original part of the trunk.

- 28 To-day, I visited the <sup>p-91</sup>Cypress swamp near Round Bay exploring it. I was pleased to find it much larger than I at first expected and that there are still many of the interesting trees growing there. What I had all along called the Cypress swamp is merely the head of it, the best part, by far, is down farther, near the creek, an arm of the Magalloway river. For some time, I have wished to visit this creek, so to-day, decided to do so. I found it easily. My first surprise, on reaching it, was the finding of the Cranberry *Vaccinium macrocarpon*, Ait. It is here, in all its glory, great patches of it. Here, too, I found, what I am sure will prove to be *Pogon ophioglossoides*, Nutt. Here, too, is the Pitcher Plant and

28<sup>th</sup>

and the Nymphs. After studying the head of the creek some time I proceeded along the left bank to the first wharf. Iris versicolor was found in several places. It was none before I reached the wharf. I ate my dinner on a little point. While eating I observed a wasp enter a little hole in the ground. I then noticed that there were any number of these little excavations scattered all over the place. Long before reaching the wharf I had come to the deep water of the creek. Here it was less interesting so I decided to return. On my way back I made a trip across the ridge to another little piece of lowland. It, no doubt is the head of some small tributary of the creek. Here, growing on an old stump, I found several fine specimens of Lentiniis strigosus, one of the prettiest of Agarics. It is one of the lathyrus forms. The lamellae are beautifully notched. I returned to the head of the creek and then explored the right bank a short distance. While crossing the swampy ground near the head I found the eggs of some amphibian (?), no doubt. I brought a few of them home with me and will try to hatch them. They were surrounded with a gelatinous substance. My trip along the right bank was very interesting. Here I found Polygonum verticillata, Nutt. <sup>(not at all)</sup> Smilax hispida, Muhl. Cypripedium acaule, Ait. etc. etc. In the wet ground grew Juncus effusus, L., but most plentifully of all Eleocharis palustris, R.Br. I enjoyed this part of my trip very much and stopped several times to sit on a fallen log and enjoy the pretty scenery before me. A pretty bird attracted my attention. It was black and appeared to have white shoulders when high up in the tree, but when it flew towards me, it looked as if its wings were red close to its body. Could it have been the red-winged Blackbird? <sup>v. p. 92.</sup> It was past 4 o'clock when I proceeded towards the railroad, passing the old familiar hut just south of the station. I now made my way to the hotel and after visiting the grounds returned to the station.

Learned to-day from Mrs. Dorsey that the Tradescantia Virginica, L. is known to her as Kiss-me-at-the-gate.

I had opportunity also to compare the leaves of Polygonum verticillata

and Medeola Virginiana. In Pogonia they are truly verticillate whereas in Medeola they form two verticils alternated, each other.

Plants in bloom

Andromeda Mariana, L. (253)

Cypripedium acaule, Ait.

Deschampsia flexuosa, Trin. (249)

Elychnia palustris, R. Br. (247)

Geranium Carolinianum, L.

Helianthemum Canadense, Mx. (238)

Ilex opaca, Ait. (250)

Juncus effusus, L. (239)

Juncus acuminatus, Michx. (237)

Krizia Virginica, Willd.

Kalmia angustifolia, L.

Kalmia latifolia, L. (241)

Leucothoe racemosa, Gay.

Lysimachia quadrifolia, L. (248)

Linaria Canadensis, Dumort.

Magnolia glauca, L.

The Pyrola was found just before reaching Wm. Doreys. There were but two plants.

Myrica cerifera is apparently dioecious, whereas M. asplenifolia is monoecious. The staminate flower blooms nearly a week earlier than the pistillate.

May 29. Took a walk with N. and the children to Backs Shore. Here I found Fumaria officinalis, L. and Potentilla Anserina, L.

Plants in bloom

Fumaria officinalis, L. (256)

Melilotus officinalis, Willd. (255)

Potentilla Anserina, L. (257)

Medeola Virginiana, L.

Nymphaea odorata, Ait. (240)

Myrica cerifera, L.

Oenothera regalis, L. (245)

Pogonia verticillata, Mtt. (260)

Pyrola chlorantha, Swartz (236)

Panicum latifolium, L. (244)

Robinia Pseudacacia, L.

Rubus idaeus, Ait. (246)

Scirpus lacustris, L. (251)

Stipa avenacea, L. (243)

Silene antirrhina, L. (252)

Sisyrinchium angustifolium, Mill. (254)

Tradescantia Virginica, L.

Vitis aestivalis, Michx. (242)

Vaccinium stamineum, L.

\* Vitis Virginica, L. (261)

30. Decoration Day. Trip through the ravine. I took this trip to-day to see Aplectrum lineale in bloom. Arrived at the Catonville terminus I went down Hilton Av. I made a nice little find, as I crossed the field at the corner of the ravine and Federick Rd - more than a dozen fine specimens of Convolvulus spithameus, L. (Calystegia spithamea, Pursh.).

30<sup>th</sup>

I went down Hilton Av. to the path leading to Fox Run. I hoped to-day to find the Hilum Philadelphiae place, but, strange to say, I fail to pass the old fallen tree. I went very slowly thinking that I, on former occasions, had passed some side path which led to it; then slowly returned over the same route, nevertheless, it was not to be found. I followed the path as far as the marked Pyrola and Abutilon places. Here, too, I had marked a place with a patch of Aplectrum, but none of the plants were in bloom. While looking about, I found a pretty specimen of Liparis about 40 ft. from the marked tree on the right of the path - a double highway is close by. Then about 15 ft. beyond the tree, on the left of the path I found a single specimen of Pogonia verticillata. Then about 60 ft. beyond the marked tree, near the end of the path I found 2 specimens of Aplectrum in bloom, one on the right and one on the left of the path. I took the specimen on the left of the path, but, in pulling it from the ground only one of the corolla remained attached to the plant. I marked the spot where the remaining corolla were by driving a stick in the ground near them. The other specimen, I left undisturbed marking only the Pine-tree near the path. The specimen is half way between this tree and a double Tulip-tree. I now, retraced my steps over the same path until I came to the path forking to the right. I then followed this path but soon saw that it was not the one I wanted. It took me to Camp Run. As it was near noon, I proceeded to Run Camp and ate my dinner. After dinner I searched for the marked Aplectrum. The one opposite the camp was nearly done blooming, the others were still in fine condition. I was anxious to note differences between Pogonia and Medeola. I find that neither have their leaves strictly verticillate and that Medeola is really more so than Pogonia. (vide p. 82). Medeola has its stem clothed with a white flocculent pubescence. Pogonia is smooth. Medeola has generally 6 or more leaves whereas Pogonia has generally but 5. My intentions now, were to go through the ravine, but an incident

now occurred which made me decide to go by way of the Observatory. By this route, I soon reached the Patapasco. I visited the transplanted Asplenium angustifolium. It seems to be all right. I now went to the ravine at Salinas Arroyo and made my way through it to Catemville Ar. The most interesting find here was a large patch of Penstemon pubescens on the east side of the field, that must be crossed before reaching the road. Just as I approached Catemville Ar. I found a single specimen of Silene vestiflora, L.

Plants in bloom.

- |  |   |
|--|---|
| <u>Asplenium</u> <u>heemale</u> , Nutt. (265)          | <u>Obolonia</u> <u>Virginica</u> , L.               |
| <u>Aster</u> <u>quadrifolia</u> , L. (267)             | <u>Polygonum</u> <u>lanceolatum</u> , L.            |
| <u>Convolvulus</u> <u>spithameus</u> , L. (262)        | <u>Papaver</u> <u>dubium</u> , L. (277)             |
| <u>Chamaelirium</u> <u>Carolinianum</u> , Willd. (266) | <u>Penstemon</u> <u>pubescens</u> , Solander (278)  |
| <u>Erigeron</u> <u>Philadelphicus</u> , L. (283)       | <u>Rosa</u> <u>blanda</u> , Wit. (279)              |
| <u>Erigeron</u> <u>strigosus</u> , Muhl. (282)         | <u>Scutellaria</u> <u>serotina</u> , Andrews, (280) |
| <u>Gillenia</u> <u>trifoliata</u> , Wench              | <u>Schistoclelea</u> <u>triacanthos</u> , L. (281)  |
| <u>Hemizonia</u> <u>purpurea</u> , L. (268)            | <u>Spiraea</u> <u>Aruncus</u> , L. (216)            |
| <u>Juncus</u> <u>tennis</u> , Willd. (270)             | <u>Secale</u> <u>Ceruleum</u> , L. (275)            |
| <u>Liparis</u> <u>lilifolia</u> , Richard (286)        | <u>Triticum</u> <u>algare</u> , L. (214)            |
| <u>Lycium</u> <u>kitago</u> , Lam. (272)               | <u>Silene</u> <u>vestiflora</u> , L. (284)          |
| <u>Liriodendron</u> <u>Pulipifera</u> , L. (285)       | <u>Vitis</u> <u>cordifolia</u> , Michx. (273)       |
| <u>Maclura</u> <u>aurantiaca</u> , Nutt. (269)         | <u>Viburnum</u> <u>acutifolium</u> , L. (264)       |
|  | <u>Veronica</u> <u>officinalis</u> , L. (263)       |
|  | <u>Poa</u> <u>trivialis</u> , L. (270)              |

For some distance along the railroad embankment, particularly near the ravine and also near the Oage Orange hedge I found Proxaria Virginiana in fruit.

I found the Oage Orange in flower. The plant is dicocious. It is interesting, noting the difference in the way of blooming of the two trees. The pistillate tree, or better, the tree which bears the pistillate flowers, produces leafy shoots of considerable length, in the axil of the 2nd leaf of which is borne the head of flower. The tree that bears the staminate flowers, on the contrary, has no leafy shoots, at any

30<sup>th</sup>

note none that bear flowers, the flowers are borne in the axils of leaves thickly clustered. So different in the appearance of a branch of this tree from the other, that for a moment, I thought it must be a different tree. I shall examine the trees again later.

June 2. Plants in bloom.

*Nuphar advena*, Ait. f. (286)

*Achillea Millefolium*, L. (287)

- 3 A nice little find to-day was *Liparis liliifolia*. I hardly expected to find it here, as the find was enjoyed so much the more.

A nice little patch of *Mitchella* was also found.

Plants in bloom.

*Salusioya parviflora*, Can. (292)

*Euonymus Americanus*, L. (288) *Mitchella repens*, L. (293)

*Ceranium columbinum*, (290) *Potentilla Norvegica*, L. (294)

*Liparis liliifolia*, Richard *Viburnum dentatum*, L. (291)

*Silybum officinale*, Scop. (289)

*Silene antirrhina*, L.

*Deschampsia flexuosa*, Trin.

- 4 While in the electric car and on my way towards Owings Mills we passed a very attractive-looking plant. I observed that we were just a short distance beyond Shirley Lane. Therefore, on my return I got off at Pimlico and walked to the place. I was pleased to find *Valeriana officinalis*, L.

My first find though was a poor specimen of Scotch Broom, *Cytisus scoparius* in the field adjoining St. Thomas Church. It was already done blooming, a single flower, only being still on the plant. In the church-yard there were more of the plants and I secured 3 for transplanting. Here, I made the acquaintance of Mr. Schaffer the sexton. I found him most agreeable and he took me inside the church.

A plant found quite frequently to-day was *Penstemon puberulus*. First of all, in a number of places along the car route, the chief and best place being quite close to Pimlico in the field near Walatiki. Then there was a great deal of it near Owings Mills just beyond the railroad station. On Garrison Rd near Gwynnbrook Av. there

was some two.

In a wet meadow on Gwynnbrook An. I found a number of specimens of Arnica montana.

Plants in bloom

- |   |   |
|---|---|
| <u>Arnica montana</u> , Nutt (306)      | <u>Nasturtium officinale</u> , R. Br. (295) |
| * <u>Echinops vulgaris</u> , L. (307)   | <u>Nasturtium sylvestre</u> , R. Br. (302)  |
| <u>Galium trifidum</u> , L. (301)       | <u>Fertusa elatior</u> , L. (289)           |
| <u>Hypericum matronalis</u> , L. (299)  | <u>Senecio Belamitae</u> DC. (298)          |
| * <u>Globularia pumila</u> , L. (308)   | <u>Thalictrum polygamum</u> , Nutt (309)    |
| * <u>Globularia spicata</u> , Lam (305) | <u>Trisetum perfoliatum</u> , L. (303)      |
|   | <u>Stellaria longifolia</u> , Nutt (304)    |

Hypericum matronalis was observed in several places along the car route. Senecio belamitae was very abundant in the church yard.

- June 5 Transplanted the 3 plants of Cytisus scoparius. One in the garden, the remaining two near the boat club close to the Catelphar.

Plants in bloom

- |   |   |
|---|---|
| <u>Medicago sativa</u> L. (310)         | * <u>Trifolium procumbens</u> , L. (311)  |
| * <u>Cytisus scoparius</u> , Link (296) | * <u>Valeriana officinalis</u> , L. (297) |
|   | * <u>Prunella grata</u> , Ait (300)       |
|   | <u>Aristolochia Clematis</u> , L. (312)   |

- 7 I took the trip along the east bank to see if Arisaema Dracontium was in bloom, (v. Myr.), Knowing how long A. triphyllum is generally in bloom and in good condition, I thought surely that the time I had allowed would be right. It, however, was too long, and not a plant was found in bloom. At first I could find only the leaf, finally, however, I found a plant with the remains of the flowers, now in a shrivelled condition. More specimens in a similar condition were now found and finally several in fruit. The location of two fine specimens of the latter was carefully noted. They were to the right of the path not far from the 3 large cypresses. A fallen tree lies across the path at this place. On the right side of path just opposite the plants I saw a large tree, this I marked by cutting out a triangular piece of bark.

I crossed the "Shades of Death" by the usual path. I then visited the Asplenium angustifolium and found it in a flourishing condition as was also the transplanted specimen.

Having crossed the river at Hollisfield, I proceeded to the Catthe palustris places and secured several fine follicles with ripe seed. All along the hillside I found Spiraea Arvensis in full bloom. In the ditch on side of railroad track I found Veronica Americana and Myosotis palustris, Watson. In several places I found Asclepias physalacoides Pursh.

I recrossed the river at Alberton and proceeded to the Asplenium Bridgii rock. The fern is growing finely. I looked carefully for A. montanum, but failed to find it. Continuing, I took the Diamond Rd. Just beyond the bridge, I found Trisetum pappulatum in bloom. Just before coming to Rolling Rd. I found Potentilla; it was growing in the field with grass.

It was on the same side as the Church and just where the road bends. Some distance beyond Rolling Rd. I made my second find Punctum <sup>p. 89</sup> laevigatum. There were quite a number of plants in a field with grass. The field was enclosed by a fence (wooden) and just beyond the house on the opposite side of road and in plain view of the large barn, which I at first thought was the Church. Plants in bloom.

Asclepias physalacoides, Pursh.

Alchemilla

Dianthus Armeria, L.

Heracleum lanatum, Mx.

Hemerocallis fulva, L. (313)

Myosotis

Phacelia

Veronica Americana, Schum.

Veronica angustifolia, Mx.

The Heracleum was also found near Alberton.

# 9. Plants in bloom

Poterium Sanguisorba, L.

Lyimachia nummularia, L.

Botrychium Virginianum

Diospyros Virginiana was almost in bloom.

Rudbeckia hirta

Lycium vulgare, Dur.

Apocynum cannabinum

Castanea pumila

July

- 11 Popula chlorantha was found in the woods on the way from the marsh to the road leading to Swan Creek. It has a delicate sweet odor.

Plants in bloom

Polanisia garden

Popula chlorantha

Amelanchier is in fruit

Melilotus alba

Diospyros Virginiana, L.

- 12 Plants in bloom

Back Shores.

Reseda luteola, L.

Diplazis tenuifolia

Verbascum blattaria

Potentilla Anserina

Linaria vulgaris

- 16 In the field at the summit of the hill I found a number of specimens of Penstemon laevigatus.

Plants in bloom

Sanicula Canadensis, L.

Nuphar advena, Ait. f.

Tephrosia Virginiana, Pur.

Holcus lanatus

Penstemon

Leonurus

Danthonia

Houstonia purpurea was found very abundantly

- 17 Plants in bloom

Cryptotaenia Canadensis, D.C.

Datura Stramonium.

Plantago major, L.

Andromeda ligustrina, Muhl.

Myosotis laxa, L.

Stemona ciliatum, Raf.

Kinnikinnick is now in fruit and is very attractive.

Mary's wort was seen frequently and in full bloom.

Quite a number of plants of Southern-wood was found near Dickeyville.

- 18 An entirely new trip to-day. I got off the North Av. electric car at the W. M. R. R. crossing. I then proceeded westerly along the railroad tracks to Liberty Rd. then along L. Rd. to the first avenue beyond Byron Oak station. Then down this avenue to the large field, across the field, following the path, into the woods and through the woods to Dickeyville. Returning I took the broad path to Byron Oak Park; keeping on the left bank of the falls, I proceeded to Powhatan, now Woodham, visiting the old mine and the dam. I then returned to Byron.

Oak Park where I took the car for home. On Liberty Rd I passed two fine cherry trees, the fruit of which was excellent.

Close to the high bridge of the W. M. R. R. I found quite a number of plants of Plantago; it was not yet in flower.

Here, too, is a lot of Consolida aspinum and

The reason that I took this trip to-day was the hope of finding Chilanthum. I was told that it grew on a rock in the woods just beyond the field. I found plenty of rocks but no Chilanthum.

The trip through the woods is a most excellent one. The path forks just before reaching the brook but reunites again beyond the brook. Just before reaching the fork, one sees a large rock to the left, around it are several white rocks. On this rock I found Trisetum. It had already flowered.

It would seem, therefore, that this species blooms earlier than T. perfoliatum and not later as stated in B. & B. Aristolochia Serpentaria is fairly plentiful in this wood. One nice specimen with a flower was collected. Two new springs were found: one near D. just beyond the path and one near the dam beyond the old mill at Ponchartraine.

#### Plants in bloom.

Aristolochia Serpentaria

Carex harpallidis

Consolida aspinum

Consolida

Mitchella repens

Lobelia spicata

Rudbeckia hirta

Rosa

Anemone thalictroides

Asclepias purpurascens

Sisyrinchium aspe

Salix

Allium Canadense

Hamamelis purpurea

Scutellaria filosa

Aprocyrum canadense

Geum

June 20 I took a trip to the Aletris formosa place, south of St. Mary's Industrial School, and between Caton and Union Avenues. To reach it, take the Wilkeson Av. car and get off at Caton Av., go south on this avenue till you reach the first lane going east, north of Washington Rd. This lane leads to a little village. Go through the village and as far as the sand bank. A large field is immediately north of the bank. The Aletris grows on the top of this bank and

will eventually be destroyed as the run cut down the bank I think, however, that the plants will remain there yet another year, provided, of course that the dig at the same rate as during the past year.

Plants in bloom

*Aletris foenicula*

*Scutellaria*

*Asclepias variegata*

June 23 Plants in bloom

*Cimicifuga racemosa*

*Rubus odoratus*

- 24 In going to the ravine, I took the route along Fox Run (v. May 30) hoping to find the *Lilium Philadelphicum*. I was unsuccessful though, just as on previous occasions. When close to the run, I saw a path which, possibly, may be the route taken on former occasions, if so, it is more rugged than the path we followed last year. I shall investigate more closely in the near future. On the way home found *Fraxinus pubescens*

Plants in bloom.

*Anagallis*

*Trifolium procumbens*

*Hydrangea*

*Trifolium*

*Asclepias variegata*

*Lespedeza*

*Asclepias obtusifolia*

*Chimaphila*

*Sericocarpus*

*Pyrola rotundifolia*

*Moristrops uniflora*

- 25 To Round Bay and the swamp at the head of the creek, a branch of the Magalloway. We took the path leading to Miss old Mrs. Dwyer. On the way we saw a Peregrine. Being quite close to us, we had opportunity to study it. It has a forked tail and on its wings two narrow white bars. It is a rather slender bird, brown, and about the size of our Eng. sparrow. Miss S. remembered that our route was the same she had been over with Dr. Uhler, and that near-by grew the Opuntia. Arrived at Mrs. D's we asked her, if she knew where the plant grew. She told us it grew on the ridges close to her house, and showed us a patch which she had, but she said, it had grown from a plant which she had transplanted from the woods. As we passed the swamp, I stopped to examine the Saxifraga Waltersii.

It had formed fruit. After a little trouble, we found the large sphagnum swamp at the head of the creek. I found that my surmise that *Pogonia sphingoloboides* and the Cranberry were here were correct. Both were in bloom. Of the former, there were hundreds of the plants in bloom, and of the latter immense patches. *Habenaria* is here too, but it is not in bloom. Some of these plants were immense. One particularly large plant was marked. We enjoyed ourselves for some time, wading about over the sphagnum covered ground. We finally decided to move onward. It was quite trying jumping from hummock to hummock, but we finally reached dry ground and a shady nook. Here we rested and ate our lunch. After dinner we proceeded towards the railroad and back to the station. Distant thunder warned us that we might have a storm. As, however, there was as yet no sign of it, we continued our walk leisurely. Just as we approached the railroad I frightened a bird from her nest. In a few moments, I had found the nest, in it were 3 little speckled eggs. Not far from the nest was a large red mulberry tree. It was <sup>laden</sup> filled with luscious fruit. We at once began sampling it and found it of excellent quality. When we reached the station we had a light sprinkle of rain but it lasted but a few minutes. We then proceeded to the well near the hotel for we were very thirsty. We sat down in the shade and enjoyed the cool breeze and the sound of the waves on the beach. Time passed very quickly and before we knew it, it was half past five. We decided to take a little walk along the beach, so walked just beyond the first swampy inlet. We then returned. On our way back we saw the red-winged blackbird, and I noted it to be the same bird observed on my trip in May. When we reached the station we had but a short wait for the train, <sup>we boarded it</sup> and arrived in the city almost on time, 7 P.M.

Plants in bloom.

*Pogonia sphingoloboides*  
*Taximin*  
*Asclepias Cornuti*  
*Epilobium*

*Crotalaria*

*Lunium*  
*Chimaphila*  
*Trifolium Arvense*  
*Asclepias tuberosa*

*Ilex glabra*  
*Azalea virginica*

*Viburnum*

*Tephrosia*

*Rubus trivialis*

*Nymphaea*


*Nuphar advena*

*Oenothera*

*Gaultheria*

*Commelina*

June 27 With Miss A. and her friends Miss W. and S. and S. to see *Chilanthus vestita*, Swartz. We met at Gwynn Oak Junction. I soon found that the route I took on the 18<sup>th</sup> was the right one, but I missed the rocks by not entering the enclosed tract. Miss A. had little trouble finding the plant and we soon found it plentiful enough. It is just beginning to form its spores.

After visiting the rocks we walked towards Miss A.'s old home, she wishing to get a hammock. On the way we found one solitary plant of *Lilium Philadelphicum* in bloom. I had opportunity, too, to notice the different arrangement of the opposite leaves on square stems. In the Mint family the leaves are placed on the sides and I believe this true for all its various species. In *Stemonema*, on the other hand, the leaves are placed at the angles formed by the sides thus: — .

Plants in bloom.

*Lilium Philadelphicum*

One particularly pretty mushroom was found, one with a leathery pileus: — *Schizophyllum commune*.

A tree was observed with several peculiar puff-bell-like growths. When broken I thought it had a chocolate odor, but none of the others detected any.

July 1 With Miss A. and Miss S. from "The Cove" to Stevenson. We took to 9 A.M. car for Emory Grove getting out at St. Thomas' Church Lane. We proceeded to Garrison Road and then to the road near the blacksmith. We followed this road then for some distance. At noon we had reached a point just beyond the avenue leading to "The Cove". Here a pretty scarlet tanager attracted our attention, so we decided to sit down and watch it.

at the same time eating our lunch. We had counted already more than 60 different plants in bloom. The two most attractive ones being Hesperis matronalis, which we found near the blacksmith's and Symphoricarpos racemosa on the left side of the road a short distance past the blacksmith's. On the road we met a quite stout woman, she was walking very fast, in fact faster than her team. She told us she did this regularly every morning; she hoped in this way to reduce her weight. We had just finished our dinner and were about to start on our trip when this comely lady was seen coming towards us with a nice lot of currants, which she invited us to take. We had now but a short distance to go and we came to a country road. This road went parallel with the stream quite a distance. Walking along it was very pleasant for we were in shade continuously. A pretty plant found here was Pyrola rotundifolia. Here, too, a dog decided to follow us, during the rest of the day he was always near us. Our road took us across the new avenue and finally to the stream. Raspberries are now ripe; in a number of places we found that variety with white fruit. When we reached the stream we crossed it, proceeded up the road a short distance and then entered the woods. We now followed the stream as best we could. On the way we found Fraxinus sambucifolia and Magnolia Umbellata, also a locality for Trillium cernuum. On a fallen decaying tree trunk we found Stem a most interesting Moss. At another place we found a bird's nest with several young ones. We all enjoyed this part of our trip very much. Another pretty find was a nice patch of Pyrola elliptica. It may readily be distinguished from P. rotundifolia by its less glossy coriaceous leaves it, too, has more leaves. When we reached the road we proceeded to Steamboat and here I bade the ladies good-bye, they having decided to take the train, and proceeded to Pikeville where I took the car for home. The day was delightful, quite cool. Notwithstanding, after I got home, we had quite a heavy down-pour of rain. After the rain, it became still cooler. The day followed me all the way to Pikeville. On my way home in the car, when

a short distance from Mt. Washington, the motorman clowed up his car and both he and the conductor began examining the ground most carefully. I thought that perhaps they had lost something. They were just about giving up their search when one of them cried out "There he is" and the motorman picked up a rock and threw it at a poor little snake. Of course he killed it, and no doubt, thought he had done a most valiant act.

### Plants in bloom

<i>Asclepias tuberosa</i>	<i>Asclepias purpurascens</i>
<i>Asclepias Cornuti</i>	<i>Festuca elatior</i>
<i>Apyrum canadense</i>	<i>Festuca</i>
<i>Achillea millefolium</i>	<i>Galinsoga</i>
<i>Avena sativa</i>	<i>Gillenia</i>
<i>Baptisia tricolor</i>	<i>Hypoxis erecta</i>
<i>Bumelia vulgaris</i>	<i>Hemichia</i>
<i>Chrysanthemum Leucanthemum</i>	<i>Hypericic matronalis</i>
<i>Chimaphila maculata</i>	<i>Houstonia</i>
<i>Comelia Virginia</i>	<i>Hyponicum</i>
<i>Calamita</i>	<i>Hyssopus</i>
<i>Ceanothus</i>	<i>Hemerocallis</i>
<i>Cichorium Intybus</i>	<i>Juncus tenuis</i>
<i>Circaea</i>	<i>Kalmia</i>
<i>Castanea pumila</i>	<i>Lysimachia</i>
<i>Castanea</i>	<i>Lactuca</i>
<i>Ceanothus</i>	<i>Lepidium</i>
<i>Cornus sericea</i>	<i>Lobelia spicata</i>
<i>Cryptotaenia</i>	<i>Lechea minor</i>
<i>Centa maculata L.</i>	<i>Lolium</i>
<i>Dioscorea villosa</i>	<i>Lonicera</i>
<i>Daucus Carota</i>	<i>Melampyrum</i>
<i>Dianthus Armeria</i>	<i>Medeola</i>
<i>Erigeron</i>	<i>Maruta</i>
<i>Erygon</i>	<i>Medicago</i>
<i>Echin vulgare</i>	<i>Mitchella repens</i>

<i>Oenothera biennis</i>	<i>Symphoricarpos racemosa</i>
<i>Oenothera</i>	<i>Solanum Carolin</i>
<i>Oxalis stricta</i>	<i>Sparganium</i>
<i>Phleum pratense</i>	<i>Stellaria media</i>
<i>Plantago lanceolata</i>	<i>Stellaria</i>
<i>Plantago minor</i>	<i>Scutellaria</i>
<i>Potentilla norvegica</i>	<i>Saururus</i>
<i>Panicum</i>	<i>Stenonema</i>
<i>Panicum</i>	<i>Scirpus</i>
<i>Pyrola elliptica</i>	<i>Sagittaria</i>
<i>Pyrola rotundifolia</i>	<i>Sesale Cuscuta</i>
<i>Pycnanthemum</i>	<i>Thalictrum</i>
<i>Rhododendron viscosum</i>	<i>Thapsus barbinosa</i>
<i>Rubus</i>	<i>Tephrosia</i>
<i>Rumex Acetosella</i>	<i>Trifolium repens</i>
<i>Rosa</i>	<i>Trifolium pratense</i>
<i>Rumex crispus</i>	<i>Trifolium agrarium</i>
<i>Rudbeckia</i>	<i>Taraxacum</i>
<i>Sennio baccantia</i>	<i>Verbascum Thapsus</i>
<i>Scrophularia nodosa</i>	<i>Verbascum Blattaria</i>
<i>Sisymbrium</i>	<i>Viburnum dentatum</i>
<i>Sinapis</i>	

Plate 15.

July 2. With Mr. Sollers to the head of the Magalloway to see the Box-Huckleberry - *Gaylussacia brachycera*, Gray. Thanks for the thunder-storm and heavy shower last evening. To-day it is delightfully cool and pleasant. We left the city on the 8.30 A.M. train, and arrived at Elston about quarter past nine o'clock. We found the roads, which generally are most disagreeable to walk over, in quite a nice condition, the rain having made the sand quite firm. We took the road to Waterford. When near the head of the mill-pond we turned into the woods, a convenient path took us to the pond. Here we found one of the largest patches of *Orontium*, I have ever seen. Quite a lot of the fruit was ripe, it reminded me very much of (the seeds) of the *Peltandra* found at Swan Creek, there was however, no gelatinous covering. The seed is within a bladder-like envelope.

I removed this covering and took it out, I then noted that it too, was <sup>covered</sup> enclosed with a gelatinous substance. There is but one cotyledon. The plumule is extraordinarily developed and twisted around the cotyledon. I cut one of the seeds in half, in the upper part of it, entirely hidden from view is a cavity having a diameter about  $\frac{1}{3}$  that of the seed itself. The plumule had 3 well-formed <sup>young</sup> leaves. The cotyledon too, with the exception of its point of attachment was surrounded with a thick coat of chlorophyll.

Here, too, we found Drosera and Nymphaea. We walked along the shore a short distance. In one little cove we found a nice lot of eggs, no doubt frog eggs, but what species of frog I cannot tell. I took a lot of them with me and will try to let them hatch out.

We now proceeded to the dam, crossed the stream and turned into the first path on the left side of the road. After going along the path a short distance it apparently returns to the road but soon turns away from it again, and follows along the edge of a large field.

We walked along this path quite a distance, Mr. S. looking out for a path leading down to the stream. We, however, did not find ~~it~~ <sup>one</sup> and we proceeded down to the marsh at the head of the stream. We then retraced our steps. On our way back, I found a nice patch of Opuntia. We went back to a point about a  $\frac{1}{4}$  mile distant and then plunged down to the stream. Where we entered was a tree with its top broken off. We soon found that we were some distance from the stream for we came to one of its little tributaries. This we crossed and kept along the bottom near the edge of the hill. We were soon rewarded by finding the plant, <sup>just as we were looking for.</sup> quite a lot of it. Mr. S., however, thought that it was a different patch from the one ~~we~~ were looking for. We kept on along the hillside and soon came to the main stream, but we found no more of the Huckleberry. We therefore got out into the open and proceeded towards the bridge.

As we crossed the dry sandy field, I observed a peculiar looking plant covering the ground, neither of us recognized the plant, it proved to be a new find Scleranthus annuus L.,. We soon reached the bridge, (Mr. S. said he found Cudolopha on the pier of the old one) crossed it and proceeded to the Opuntia place. We then went to the spring and here we ate our lunch. After dinner we retraced our steps to the road, crossed one of the little inlets and proceeded along the left bank of the river. We kept on this bank & proceeded some distance up the first inlet we came to. We had left the water some distance behind us, when we came to a nice patch of Vaccinium Pennsylvanicum, Lam. It was in fruit. We found the patch near a fallen decaying tree-trunk. Close by stood a tall tree its bark entirely stripped from one side. We kept along this streamlet and soon found more of this same plant. We found Saultheria and Chimaphila maculata almost everywhere. After going up this little stream quite a distance we crossed it. In the bottom we found Carex aculeolata Michx., one of the most notable of this difficult genus. Its spikes are few-flowered and the teeth of the perigynium are strongly reflexed. Here too was Carex folliculata L. We now proceeded along this side of the stream, until we came to one of those old roads made "passable for horse and foot". Mr. S. now led the way across the country in an almost direct line for Elvaton, across roads and across stream, up hill and down hill, through fields and through wood. We soon saw that we had a chance to make the 4.20 P.M. train and so hurried onward. We reached the path to the station about 4.15, we knew then that if the train were on time we would not be able to make it. But trusting to its being late we kept onward and arrived at the station about 5 minutes after train time. The train had not come, it was late. We waited 5 more minutes, still it did not come. Presently an engine came in sight, it was on its way to Annapolis. Not long after this the train from Balto. arrived. It departed but still no news of our train. We then heard that something had happened to the engine. After a wait of over an hour, our train arrived, the engine we saw going down

\* *Cnopus Acanthium*, L.

was attached to it. We arrived in Camden station a little after 6 P.M.

Plants in bloom

*Agrostis scabra*  
*Asclepias obtusifolia*  
*Apocynum androsaemifolia*  
*Alicia Plantago*  
*Agrostis vulgaris*  
*Arabis lyrata*  
*Andromeda ligustrina*  
*Chimaphila maculata*  
*Carex cubulata*  
*Carex folliculata*  
*Cephalanthus occidentalis*

*Chondrilla juncea*, L.  
*Santhalia*  
*Rubus tiniahi*  
*Magnolia glauca*  
*Scleranthus annuus*  
*Rhus glabra*  
*Opuntia vulgaris*  
*Glyceria obtusa*  
*Glyceria nervata*  
*Ipomoea pandurata* Moench.  
*Gerardia flava*  
*Gymnocladia dioica*

July 6 To the Ballast region in Canton. The *Aristolochia* *Clematitic* place seems to have been entirely destroyed by the railroad tracks to the new pier. The *Scotch Thistle* is increasing in numbers. I found it in fine condition, the *Musk Thistle* (*Carduus nutans* L.) on the other hand was not abundant. But one plant of *Eryngium yuccifolium* was found. The patch of *Euphorbia Esula* is still there. *Ononis repens* is spreading; it was in fine condition. The best find of the day was a nice patch of *Linaria* *Elatine* on the north side of row of tracks to the pier. <sup>D.C.</sup> Here, too, I found several plants of *Nasturtium palustre*. A large patch of *N. sylvestre* R. Br. was found later in the lot below the ditch. Here, too, grew the only plants of *Lotus corniculatus* that I saw. I proceeded down to the water's edge then along the shore to the large drainage ditch, then back to the railroad tracks. The water-tank near the large pond has been removed, the various water pumps are now fed directly from the tank at the well. Near this latter place is still the large patch of *Eupatorium hyssopifolium* L.

\* From the bridge, I went to Stony Creek, following the road. Near the bridge I found a nice lot of *Agropyron repens* with long awns.

### Plants in bloom.

*Asclepias Corallina*  
*Carduus nutans* L.  
*Erigeron arvensis* Hoffm.  
*Eichorium Intybus*  
*Coronilla varia* L.  
*Euphorbia Esula*  
*Linaria Elatine*  
*Eryngium yuccifolium*  
*Menziesia rotundifolia*  
*Verbascum sinuatum*  
*Verbascum Thapsus*

*Ononis repens*  
*Onopordum Acanthium*, L.  
*Nasturtium sylvestre* R. Br.  
*Nasturtium palustre* D. C.  
*Urtica*  
*Lotus corniculatus*  
*Anagallis arvensis*  
*Cuscuta Lemmonii*  
*Mercurialis annua*  
*Verbascum Blattaria*  
*Rumex crispus*

July 9 To Stony Creek. I took the early, 6 A.M., boat and got off at Boyd's at the mouth of the creek. I then proceeded to Cox's Creek. It is a pretty sheet of water, but rather hard to get around without a boat. I proceeded as best I could along the bordering fields to the bridge. My first find was at Boyd's. Here grow a number of plants of *Ruellia ciliosa*. Then along the shore of Cox's Creek I found *Cicuta occidentalis*. When I reached Stony Creek I was able to follow the shore a short distance. I had not proceeded very far when I made my best find of the day *Dianthus Americanus* L. Here, too, I found *Scirpus pungens*, most excellent specimens, so large that I thought at first they might be *S. Olneyi* Gray, and a nice specimen of *Spizanthus pusillus*. When I reached the head of the first little arm of Rabbit Creek, I decided to cross the country to the head of the main branch of this creek, so asked a young fellow who was plowing to direct me. I found that I was on a narrow wagon path, which would take me back to Boyd's. He told me to follow this path and then turn to the left at a certain point. I, therefore, kept on the path, but had not gone very far when I met several boys. When I asked them how to get to the head of Rabbit Creek, one of the boys, the oldest, said as he was going in that direction, he would show me. We, therefore, proceeded together. On the way, he told me that his home was in San Fran-

cicero, and that he had worked his way here, going around Cape Horn. He was a very nice boy but I think a little simple-minded. We went together as far as Solley's Post-office. I was now on the Marley Neck Rd, some distance from the head of Nabby Creek. He then told me to go out along the road and I would get to it. This I, of course, knew was wrong, so I asked the first person that came along how to proceed. As his directions were not explicit, I decided to follow my own views. I proceeded along the road until I came to the church and then turned in to the left. Passing a house, I asked the lady if I was on the right road to the creek. She told me to ask at the next house which was Mr Johnson's, that the road I was on led to Johnson's wharf. I therefore kept on out the road. I very soon came to where it forked. Thinking the left hand fork would be the proper one, I took it. It took me to Nabby Creek, following the creek some distance and finally bringing me to its mouth at Stony Creek. Had I taken the other fork I should have gotten to Johnson's Whf. From the time I left Cox's Creek, I had been accompanied by a dog. At Solley's I found that a second dog had also decided to go with me. Wherever I went, they followed. They were very nice companions, yet I wished that they had remained home. At Nabby Creek I passed a "fishing shore" and having told the folks there that the dogs had followed me, one of the men decided to try to hold on to one of them; this he succeeded in doing, I wish he had kept both. As it was the dog that had been following me all day, kept close to me and when I continued my tramp proceeded with me. I found my way now to Altona Shore, then around the little cove and finally to the house occupied by the glassblower from W. Va. As I passed through the woods at the head of the cove I found several Amelanchier trees, the leaves of which were attacked by a rust

The entire under surface of the leaf was covered with black spores. The leaves thus attacked grew in clusters which gave the tree a peculiar appearance. Here, too, I found quite a number of specimens of Pogonia verticillata. As the glassblower I asked how I should go to get to Johnson's Wharf and was kindly rowed across the little cove. The glassblower's little boy was anxious to keep the dog, but his father did not think him worth keeping, as he no doubt would not stay with them.

The dog, therefore, got into the boat and followed me, I wish now that I had managed to let him stay there on the shore. From Johnson's Wharf I proceeded around the next cove to Howard's Wharf and here I made the acquaintance of Mr. H. I liked him very much. Mr. H. does not like the Germans as picture, he prefers the negro, who is generally "hard up" and willing to work. He likes the Bohemians better than the Germans. He was picking tomatoes to ship to Boston. They are picked green. He said that if the tomato has its full growth it will ripen. He has a large naphtha launch for shipping his goods. On his place, too, is a large sand bank. The Petrel was behind time to-day and it was past five before she arrived at the wharf; when I got aboard the dog followed but I told the clerk it was a stray dog and he drove him ashore. As the boat left the wharf the poor dog cried, I felt very sorry for him, but felt consoled that he no doubt will be able to find his way back. It was nearly 8 o'clock when we arrived in the city.

When I left home, it was cloudy and threatening rain, but the sun soon came out and there was no rain.

The summer has, up to date, been a very wet one, in the last three weeks there have been but four days in which there has been no rain.

#### Plants in bloom.

*Asclepias tuberosa*  
*Asclepias Cornuti*  
*Apocynum cannabinum*

*Abutilon Roseum*  
*Andromeda ligustrina*  
*Asparagus officinale*

*Ampelopsis quinquefolia*  
*Agrostis alba*  
*Agrostis scabra*  
*Agrostis vulgaris*  
*Agropyron repens.*  
*Cassia nictitans*  
*Chrysanthemum leucanthemum*  
*Chimaphila maculata*  
*Commelina Virginica*  
*Carex cincta*  
*Cephalanthus occidentalis*  
*Cicuta maculata*  
*Cactanea pumila*  
*Cactanea vesca*  
*Convolvulus sepium L.*  
*Danum Carota*  
*Datura Stramonium*  
*Dianthus Americanus L.*  
*Erigeron annuus*  
*Erigeron strigosus*  
*Erigeron Philadelphicus*  
*Euphorbia corollata*  
*Euphorbia*  
*Euthamia procumbens*  
*Hydrocotyle*  
*Hypoxis*  
*Hypoxis*  
*Hemerocallis fulva*  
*Impatiens fulva*  
*Ipomoea pandurata Meyer*  
*Ipomoea hederacea, Jacq.*  
*Ipomoea purpurea Lam*  
*Juncus tenuis*  
*Juncus acuminatus*  
*Juncus*

*Rhododendron viscosa*  
*Lichia minor*  
*Brunella vulgaris*  
*Baptisia tinctoria*  
*Krizea Virginica*  
*Ludwigia alternifolia*  
*Melampyrum Americanum*  
*Mollugo verticillata*  
*Oenothera*  
*Oenothera cinnata*  
*Oenothera biennis*  
*Oxalis stricta*  
*Potentilla Norvegica*  
*Phytolacca decandra*  
*Phlox pauciflora*  
*Plantago lanceolata*  
*Plantago major*  
*Polygonum Pennsylvanicum*  
*Polygala fertilis*  
*Rumex acetosella*  
*Rumex crispus*  
*Ruellia ciliosa*  
*Rhus*  
*Rosa Carolina*  
*Sambucus Canadensis*  
*Sisymbrium officinalis*  
*Solanum Carolinense*  
*Saururus*  
*Sagittaria*  
*Spartina juncea*  
*Samolus*  
*Spiranthes pauciflora*  
*Stylocanthus elatior*  
*Senecio*  
*Senecio*  
*Solidago odora*  
*Sperularia perfoliata*

*Scirpus maritimus*  
*Thalictrum polygamum*  
*Trifolium pratense*  
*Trifolium arvense*  
*Pecunia radicans*  
*Verbena stricta*  
*Verbascum Thapsus*

*Scirpus pungens*  
*Trifolium repens*  
*Trifolium agrarium*  
*Trifolium*  
*Teucrium*  
*Verbascum Blatteria*  
*Lycium Carolinum*

Pl. 12

I heard to-day that the leaves of the Sweet Gum dried and then a tea made of the same, is most excellent for the dysentery. The fisherman, who told me, related the following:— A friend of his was very sick with the dysentery, so sick that he thought he would die. He was sent into the country. A German lady meeting him, asked him what was ailing him, and he said he had the dysentery. Then she told him to get some leaves of the Sweet Gum, dry them on the stove and make a tea. He was so sick that he said "Well, I am going to die anyhow, so I will try it". It cured him in 4 hours.

July 13<sup>th</sup> To Glenburnie to explore the "fern district." When I reached Furnace Bar. I observed that the water was quite muddy something unusual, a sufficient deposit of mud generally taking place in the pond to prevent this.

I took the outer path to-day and then explored the low ground between it and the branch. I soon came to the Habenaria but none were in bloom. Here, too, grew Woodwardia Virginica. It was fairly common, but I could find no fertile fronds. These, however, I know are only found in June. Although this fern can readily be distinguished from Osmunda cinnamomea by its stipe being black whereas that of the Osmunda is green, I thought I would see if I noted any differences in the fronds. I find there to be almost identical in form, but markedly different in their venation. In Osmunda cinnamomea the mid-vein of each pinna<sup>ule</sup> extends to the mid-vein of the pinna thus ~~not~~ <sup>is</sup> and is quite prominent, of a green color. In Woodwardia they do not but extend to a mesh of vein-work, neither are they prominent and are of a brownish green color.

It was noon when I reached the pond, so I ate my lunch on the hillside overlooking the water.

After dinner I tramped around the pond. At the head of the pond, near the huts I found two Habenaria Blephariglotha in bloom. I now proceeded towards the branch. It is this region, around the head of the pond, extending to the railroad tracks that I have designated the "fern district". Formerly I limited my exploration to that portion near the railroad and on the right bank of the stream. I now see that in this I made a mistake the best region is much further down and extends on both sides of the branch and its tributary. Here, too, I found a fine specimen of Habenaria laevis in full bloom. I think it almost as pretty as H. Blephariglotha. To-day I looked up the two Nephrodium acrostichum and Thelypteris and am now well able to distinguish one from the other. The venation of the former is simple that of the latter is forked. The pinnae of the former are smaller near the stipe than in the middle, those of the latter are about the same size. The lower pinnae of acrostichum too, are generally smaller and more deflexed than those of Thelypteris. In this "district" I found Nephrodium acrostichum, N. spinulosum var. intermedium and also Athyrium Filix-foemina. Here, too, were plenty of Poa Grapes. It was about 4 P.M. when I started homeward towards the railroad tracks and then to the farmland beyond the branch, and across them to Pumphrey's path. I followed this path back to the main road.

#### Plants in bloom

Habenaria laevis

Habenaria Blephariglotha

Sonchus

Ruellia ciliosa.

July 15 While going along the B. & O. R.R. tracks I found again the Verbena bracteosa, Wm. There were a number of plants, so I secured two for my herbarium. I secured, too, a number of specimens of Polanisia graveolens. It was after sun-down when I collected them. While looking over the lot, I was attracted by the pinnate appearance of a certain plant. This plant had opposite leaves. These were beautifully folded upward against the stem and thus brought their upper faces together. I was somewhat surprised to find that the plant was Euphorbia Preslii, Wm. I did not know that its leaves went to sleep.

Plants in bloom

Verbena bracteosa Wm

Polanisia graveolens

Euphorbia Preslii Wm.

16 To-day, I rode to the terminus of the Belair Rd electric line. I then continued my trip out the road - 2 miles farther - to Patty Hill. Arrived at Patty Hill, I proceeded eastward. The road I took branched a short distance beyond Belair Rd, I took the road to the right. At the next forking of the road I again took the road to the right; at the next fork I took the left and this was the only left hand fork I took. The next one was again to the right.

The first thing of interest was the number of cherry trees. Nine large trees, still with fruit were passed. I managed to get some of the cherries and found them fine.

It was very warm and walking along the sunny road was not one of the pleasantest occupations. Very glad was I, therefore when I came to what was named the Sun Spring Mill. A well-worn path showed me the way to the spring close to the mill. The water was fine - cold and delicious. Just beyond this mill, but on the right hand side of the road, I made my first find - Lobelia Nuttallii Robinson & Shult. I secured three or four of the plants. It is quite a delicate plant compared with the other members that I know of this genus.

Just before reaching the spring I had <sup>after</sup> eaten my dinner in a little

bit of shady woodland. While I was eating I heard a peculiar rustling sound behind me. I looked carefully in that direction and presently a large box tortoise came in sight. It suddenly stopped and remained perfectly still, no doubt it had become aware of my presence. After eating my lunch, I walked over to the creature and picked it up. I noticed a little crack in the shell near its head, from it blood was oozing! Can this be true? What else could the red fluid have been?

I was where the road closely approached a little stream that it forked and I took the left hand road. And it was just a short distance beyond on the left side of the road near a little run that I made my second find Pycnanthemum muticum Pur. I saw at once that it was a Pycnanthemum, but its glossy green rigid leaves told me at once that I had a species entirely new to me. Here too I found Rhynchospora gracilentia Gray; it is fairly common. Just before coming to the last named fork in the road and yet some distance beyond the second fork I found a number of plants of Archie spinosa on the left side of the road.

Nothing further of particular interest attracted my attention among the flowering plants. Among the Fungi I made several finds. This summer with its great amount of rain has been a very good one for these low forms of plant life. A number of the plants were collected. Among them I had the following:—

Amorita verna Bull., Gasteria fuliginosa Fr., L. recurva Fr., L. chrysocoma Fr., and Lentium lepidum Fr., The latter was particularly abundant on the railroad tie of the Back & Middle River electric line. The road I was on finally terminated at Roseville Philadelphia Rd. From there to Stemmer's Run and then to Eastern Av. was but a short distance. On the way

from Stinner Run to the electric line, I found a nice spring, on right side of the road.

Plants in bloom

*Globelia Nuttallii*

*Pycnanthemum muticum*

*Rhynchospora gracilentia*

*Sparganium*

*Verbena*

In a number of places along the route I found many plants of *Helianthemum*. These plants, now, of course, have no longer any of their conspicuous showy flowers, but are literally crowded with their inconspicuous secondary flowers. Thus appearing like plants going to seed. Each capsule that I opened contained 2 seeds.

July 20

My trip through the ravine to-day was for several purposes. First of all I wanted to study the species of *Fraxinus*. Second I hoped to find the fruit of *Dirca palustris* and third I hoped to find plants of *Habenaria lacina*. Having found a tree of *Fraxinus pubescens* on the road to the Pump-house, on a former occasion (v. June 24.) I proceeded in that direction. I had no trouble finding the tree, and secured specimens both of leaf and fruit.

I now went to the little swamp where I found the *Habenaria lacina* on a former occasion. I searched carefully but no plants were found. From the little swamp I proceeded to Owl Spring. On my way surprised three box tortoises eating mushrooms. One was eating a species of *Russula*; the second a *Lactarius chrysorrheus* Fr.; the third was eating a yellow colored mushroom. I failed to recognize it as it was eaten away too much.

Arrived at Owl Spring, I looked up my various transplanted specimens, also the *Tipularia*. The latter is doing well, there will be two spikes of blossom this year. *Viola Barheimsii* is still living. *Hepatica acuta* is growing finely. And *Lysichiton palmatum* is still holding its own. I ate my dinner at the spring and then crossed the hill to Camp Run. Here I looked up *Dirca palustris*. The fruit has ripened and fallen. I stopped a few minutes at Run Camp, then crossed the stream and proceeded to

the brook. I found the Aplectrum opposite the camp in fruit. I marked it for future study (A string with four knots in it is tied around its stem). As I descended the river I observed the large beech marked last spring. Here grows a nice specimen of Fraxinus viridis. This was an unexpected find. It is readily distinguished from F. Americana, by its leaves being a bright green on both sides, whereas those of Americana are much lighter almost "white" on the under side. The leaflets of viridis are somewhat serrate above whereas those of Americana are almost entire, being simply somewhat undulate. When I reached the brook, I crossed to Camp Cozy and then proceeded right through the ravine. Near the mouth of the ravine I found several fine specimens of Lactarius piperatus (Scop.) Fr. This is indeed a pretty mushroom, pure white, 2 to 3 inches high, diameter of cap. 3 to 5 inches, stem nearly an inch thick, when broken there is a copious flow of white milk of a very hot & peppery taste. While looking for my transplanted Aplectrum angustifolium, which is doing well I found a nice specimen of Fraxinus canadensis Lam., it may be distinguished from all other species by having its leaflets serrate, these are nicely serrated, green both sides and smooth except where they are attached to the petiole where there is a copious supply of rusty hair. Right at the entrance of the ravine and easily observed from the railroad there are several fine trees of F. pubescens, it is easily distinguished by having its young shoots, petioles, backs of the leaves and peduncles densely pubescent.

Nothing new was now observed until I reached the River Rd. Here I found Minulus alatus Ait. growing along with M. rugosus L. The former has almost sessile flowers and leaves with petioles, the latter has sessile leaves and flowers with peduncles. Here too, grew a lot of Hyssopus riparius, and Gratiola Virginiana. These two look somewhat alike. The former has square stem, the latter round one, Hyssopus is just beginning to flower, Gratiola is nearly done.

Here, too, I found Marchantia polymorpha in excellent condition. All during this month, but especially so during the last two weeks the bark of Platanus occidentalis has been falling from the tree. On my way homeward, along the tracks I kept a look-out for the Vicia Cracca and Ononis repens. Both were found. Learned, too, of a nice spring near the watch-box on the old A. & B. S. L. Arrived home before 7 P. M.

A number of interesting mushrooms were brought home. — Lactarius piperatus (Sw.) Fr., L. resinus Fr. Cantharellus cibarius Fr., a beautiful yellow-colored one, Pleurotus ostreatus Jacq. the oyster agaric, quite plentiful on a dead decaying stump, and a species of Lepiota, most likely L. Americana Bk. While going along the River Rd I passed a Witchhazel with a great mass of the peculiar excrements caused by aphides. I was surprised to find hundreds of bees busily collecting the honey-dew. At Centin Place I found specimens of Centiaria crinita. Observed, too, the peculiar form of Smilax glauca can it be Smilax spinulosa?

#### Plants in bloom.

Minutaria rugosa  
Minutaria alata  
Thyranthus riparia  
Crataegus Virginica  
Penstemon Canadensis  
Vicia Cracca  
Impatiens pallida  
Impatiens fulva  
Crotellaria  
Cornus Chamacrista  
Hypoxis erecta  
Lobelia inflata  
Alisma  
Desmodium acuminatum

Agrimonia  
Pycnanthemum incanum  
Helianthus divaricatus  
Anemathemum  
Lobelia inflata  
Ononis repens  
Nasturtium palustre  
Echinopspermum Virginicum  
Apocynum tuberosum  
Vernonia  
Aralia racemosa  
Phytolacca  
Cicuta maculata  
Desmodium nudiflorum  
Palactia

Two peculiar mushrooms were observed: a tiny little one growing out from the stem of a larger one, and several

July 23

small one growing out from the decaying mass of a larger one. A trip to Magothy Creek. I went there especially to see the Sabularia-like plant observed on my trip of June 25. Mushrooms were observed everywhere species of Amanita, Russula, Lactaria and Boletus were everywhere. One particularly pretty Boletus with a dark red pileus, stem reddish & prominently reticulated, tubes of nearly same color as pileus, flesh white, was observed. The specimens were 3 in. high, cap 1 to  $1\frac{1}{2}$  in. in diameter, stipe nearly  $\frac{1}{2}$  in. in diameter. I have no description exactly corresponding with it.

I had no trouble finding the Lambert bog and was pleased to find many of the plants with fruit. I was surprised though in not finding any fruited specimens of the Pogonia ophioglossoides. I was pleased to find Habenaria ciliaris, 16 specimens were counted. No doubt there are many more, for the plant is just beginning to flower and is therefore hard to see. After a little search, I found the specimen marked on my last visit; it proved to be H. blephariglotis. This particular species is very plentiful. I observe that it comes into flower more than a week, at least 10 days, earlier than the ciliaris. I have always thought that the ciliaris preferred very wet places compared with the blephariglotis, but, here, I find both species growing together - the latter in full bloom and the former just coming into flower.

Nothing new was observed. I made my way across the branch to the spot where we ate dinner last trip. Here the fungi were particularly fine. Some fine specimens of Lactaria corrugata Fr. were found and among them one of Lactaria rufus. Here, too, grew a mushroom which I failed to determine; it looked very much like L. corrugata, but had not a milky juice. Its pileus, too, was marked with several deep cuts. Its stipe and gills were much lighter (almost white),

than those of *L. corrugis*. On the hillside, I found some pretty plants of *Clitoria Mariani* with flowers exceptionally large. I, again, found the path near the field. To-day, I observed that it also entered the woods, I failed to see this last time, so decided to see where it went. It takes one through the beautiful swampy region at the head of the creek and finally stops at another field. It is a region well worth visiting and I wished I had not arranged to go home at noon.

*Smilax Walteri* was found near the spot where we camped on our last trip. Here, too, *Aporosa tuberosa*, most beautiful specimen, were growing. Here, too, were plenty of jiggers as the welts on my body testify.

Although I collected quite a number of mushrooms I was only able to determine the following:— *Lactarius corrugis* Pk., *L. fuliginosus* Fr., *L. rufus* (?), *L. gerardii* Pk. and *L. resinus* Fr.; *Russula verrucosa* (Schaff.) Fr. and *R. emetica* Fr.; *Schizophyllum album* (L.) Schweit.; *Amanita solitaria* Bull.; and *Boletus americanus* Pk. Besides these, I had also *Amanita caesarea* Scop. (?), *Lepiota* —, *Boletus* —, *Russula* —, *Galactia pilosa* is now in full bloom.

Plants in bloom.

*Aporosa tuberosa*

*Monarda punctata*

*Asclepias incarnata*

*Pontederia*

*Ascyron* Cms.-Andree

*Clathea alnifolia*

*Clitoria Mariani*

*Vernonia*

*Galactia pilosa*

*Santtheria procumbens*

*Calceolaria blephariglossa*

*Zizania aquatica*

*Habenaria ciliaris*

A fern with a frond very much like *Asplenium thelypteris* or *Asplenium thelypteroides* but with a dark stripe attracted my attention. It was sterile.

July

27 A trip to-day with Mr. Sollen and Mr. Forest from the water-tower at West Arlington (Mr. F.'s home) along through the rear of Mt Hope property and across the country to Gwynne Falls, then along the falls to Scott's Level Run. and then through Sudbrook to the electric car.

We met at the water-tower at 9 A.M. We walked along the avenues of W. A. until we came to the Liberty Pike. Here we found a nice path leading through the woods and to the fence of Mt. Hope property. We then kept along the fence until we came to the field and the ice pond. Here in the stony soil I found *Paronychia dichotoma* Nutt. We crossed the field, examined several bits of woodland, but kept continually moving towards the west. A number of interesting things were observed, of course in the Pungy, for we to-day intended to do this particularly. Among the most interesting were the following. Two fine specimens of *Lactaria indigo* (Schw.) Fr., a fine one of *Tremella furiformis* Berk. it is pure white, has somewhat the appearance of boiled starch, the masses are soft, dichotomously branched and hollow. A beautiful lot of egg-yellow *Cantharellus* was found, could it have been *C. cibarius* Fr. or what Underwood calls *C. cantharellus*? A great many of the red *Cantharellus* were also found. They, no doubt, are *C. cinnabarinus*. We found both *Amanita muscaria* L. and *A. caecarea* Scop. Several fine specimens of *Daedalea*, and *Clitocybe infundibuliformis* Scheffer, were also found.

Besides these there were others which we failed to recognize. After a while we came to a nice avenue. This we crossed entered the woods again and proceeded almost directly west. We then came to another road and then to the falls. We remained on the east side of the stream until we came to the old homestead. This part of our trip was beautiful and very interesting. At the spring we ate our lunch. At the old homestead we found *Viburnum Prunum* L. quite abundantly. Here we crossed the falls and proceeded along the west side to Scott's Level branch. On this side of the stream we found *Monarda*.

fiatoloca, The Panjo-tree in fruit (green) Potamogeton natans, Minu-  
lex ringens and M. alatus. and Zamichellia palmata L. (?) W. S.  
also showed me where Dr. Barton once found Isotria.

At Scott's Landing we recrossed the falls and proceeded to  
Sudbrook and from there to the Emory Grove car. Our trip was  
a most enjoyable one.

Plants in bloom.

Minulex ringens

Minulex alatus

Sassa bicolor

Hibiscus Parviflorus

Paronychia dichotomum

Gratiola Virginiana

Solidago Decumbens

Phryma leptostachya L.

Monotropa Hypopitys

Monotropa uniflora

Veronica Virginica

Panicum anceps Mx

Carex stenolepis

Carex lupulina.

Potamogeton natans

Zamichellia palmata

Lilium superbum

Sabbatia angulata

Monarda fiatoloca

Physalis viscosa

Dianthus Armeria

Cassia Minlandica

July 30

I took the Emory Grove car to-day to Owingo Mills. I was  
anxious to see if Habenaria purpurea was in bloom.

The first thing that attracted me as I entered the marshy  
ground was the beautiful Phlox maculata L. Presently I  
found one of the Habenarias, but it was not in bloom. Finally  
I found one in bloom, but it had just begun, and I concluded  
that I had come too early. While searching I found  
Salvinia asprellum Mx in full bloom; it well deserves its  
name of rough bedstraw. It blackens very easily in drying.  
Here, too, I found Polygala sanguinea and Campanula  
aparinoides. Here, too, grew two pretty specimens of Lilium  
superbum. They were indeed superb. Each was over 8 ft  
high and had more than 50 flowers apiece. And lastly, here  
also, I found a new species of Rubus. The stem was closely  
clothed with weak prickles. I make it Rubus setosus.

I had given up the idea of finding any flowering specimens  
of the Habenaria when, on going to the spring I found two pretty

specimens. They were growing in very wet soil. It would seem, therefore, that those that grow in wet soil come into flower first and later those growing in dry situation.

It was only 11 o'clock, but as I was now near a good spring I decided to eat my lunch. This I did and then proceeded to the other *Habenaria* locality. On the way I found two pretty specimens of *Decnodium canadense* D.C. It is indeed the <sup>most</sup> showy of our *Decnodiums*. When I first saw it, I was about 15 ft. from the plant, and I failed to recognize it as a *Decnodium*. This I think the first time I have seen the plant. Later found a most perfect specimen growing with the *Habenarias*. When I first entered the *Habenaria* swamp.

I thought I would be disappointed, as not a plant was to be seen. However, when I reached the very wet portion, I found them abundant enough - forty specimens were counted. Only a few of these were in full bloom; no doubt, had I come a week later, I would have found many more. As I walked up the hillside I found *Anychia dichotoma*. I grew very profusely. I now proceeded to McDorough. I must not forget, however, that at the junction, I re-found that pretty Labiate, (found on my first trip), and this time determined it as *Slachys hypolepifolia*, Mx.

At McDorough, I asked how I could reach Horsehead Run, and was told to go up the main road to the woods and then go to the left. This I did. It was not so easily done. I found a number of benches, all small; I crossed them and finally came to a pretty foot-path. This I followed, and it took me through a very pretty piece of wood-land. Ferns were everywhere. It presently brought me to what I later learned was the Horsehead Run, and then following this stream to Swynn's Falls. Here I learned that the run was called Horsehead Run because it went through

Horsehead woods, and that the woods was called Horsehead woods because they were shaped like a Horse's head.

In the woods I found a number of fungi: - *Heisteria* different species, *Ramaria virescens*, a species of *Boletus*, and one of *Stropharia*. The latter has brown spores. Earlier in the day, in a little woods near the Habernia swamp, I found *Pluteus* - most likely *Pluteus cerinus* Schaef.

When I reached the falls, I proceeded along its right bank to Mt Wilson. I then went back to the railroad tracks and followed them to the electric cars at West Arlington.

Near Sudbrook Park <sup>north of it</sup>, I found both *Veronica Virginica* and *Monarda fistulosa* in abundance. Here too, I met an undergraduate student of the Hopkins, busy shaping out mineralogical specimens of *Peridotite*. He showed me also specimen of *Gabryl*, which somewhat resembles it.

The latter is much lighter in color and lacks the dark crystals found in the former. *Peridotite* is very tough, and is hard to shape into specimens. It was nearly 6.30 P.M.

when I reached W. A. My ride home was an enjoyable ending for the day.

#### Plants in bloom.

*Asclepias verticillata*

*Amyclia dichotoma*

*Camelina nativa* Gray.

*Dianthus Armeria*

*Euphorbia corollata* L.

*Euphorbia maculata* L.

*Euphorbia Peckii* Guss.

*Fagopyrum esculentum*

*Goodyera pubescens*

*Habenaria peruviana*

*Silene stellata*

*Saponaria officinalis*

*Veronica Virginica*

*Polygala canadensis*

*Lilium superbum*

*Lobelia cardinalis*

*Mentha viridis*

*Campanula aparinoides*

*Decumbium Canadense* D.C.

*Nepeta Cataria*

*Phlox maculata*

*Monarda fistulosa*

*Rudbeckia hirta*

*Salix asprellum* Michx.

*Spirea tomentosa* L.

*Spirea salicifolia* L.

*Sorazhim*

*Stachys heterophylla*

Between Mt Hope and West Arlington I found the hillside covered with Asclepias verticillata.

The geological specimens were to be  $3\frac{1}{4} \times 4\frac{1}{4}$  (3).

August 3

A trip with Mr. S. to Chain's woods. We met at the terminus of the Curtis Bay electric line, walked through Flood's park, and at the point took the ferry across. The fare across was but 5¢ for each. Arrived at Chain's wharf, we crossed his fields and entered the woods. One of the first things I found was the beefsteak mushroom Pistulina hepatica Fr. It well deserves its common name. The upper surface is dark red, soft and sticky to the touch like a piece of raw meat. We searched carefully for more specimens but with poor success, the few others found being very small. Close by, we found a nice lot of ripe huckleberries. In a small area we found four different berries: Vaccinium stamineum; V. vacillans, Gaylussacia resinosa, and S. frondosa. Mr. S. thought there was a fifth, but I think the one only a variety of S. resinosa slightly more pubescent. We searched the woods now very carefully, with the hope of finding a nice lot of mushrooms. There, however, were rather scarce. Still, we found a few. Collybia radicata Kehl., that peculiar mushroom with a long root-like attachment was found. Two pink-spored ones belonging to the genus Entoloma, the species could not be determined. Also Amanita frostiana Tk. Another thing found were several different puff-balls; one, quite rough which when cut open was dark purple inside, was the youngest specimen was purple inside; one, which was quite buried under the ground; and one, which we determined, surrounded by a gelatinous covering—Calostoma cinnabarinum Dew. This is a peculiar looking fungus. There are generally several growing together, close to the ground. From out the mass of jelly, one sees a yellowish spherical body slightly projecting; at the apex one observes a few teeth of a beautiful vermilion color. If one of the puff-balls is cut open, one sees

- \* Here the playman told us that Lobelia cured him of the chills & fever, it caused him to vomit an "ague-cake".
- 14 Mr. Bibbin found on a Polyporus a striped lizard, she vainly attempted to save her 9 small rubber-like eggs.

in the center a small white mealy body, this is surrounded by a dark covering, colored vermillion on its outer surface, this in turn is also surrounded by a dark covering which is gelatinous on the out side. A pretty *Amantopis* was also found, I think it *A. voluta*. It was so pretty I put a specimen into formalin. In the woods found several pretty specimens of *Goodysia pubescens*. We ate our lunch on the shore then continued our search through the woods. About 3 o'clock, however we decided to start homeward. Arrived home, I found a postal from Fred R. asking me to meet him at the boat-club. I, therefore, started at once. In the field on Charles St., found a nice lot of the *Fairy King* *Marasmius oreades* Fr.

Plants in bloom.

*Goodysia repens*.

*Hibiscus* Mor

*Gophanthus*

Aug. 5-12. The buried forest is opposite Maxwell Pt. Here on the beach are still two large Cypress stumps besides quite a number of knees which have been unearthed. In the black deposit of the buried forest may be found, ancient beech-nuts and Pine-cones. I walked along the beach, and was pleased to find *Fog-fruit* *Lippia lanceolata* Mx. also plenty of *Sabbatia stellaris*, *S. chloroides*, *Discopleura capillacea* and *Lythrum huius*. At Bumpower (signal-station) I found *Lythrum Salicaria* and a pretty species of *Spiraea*. Here one may see a path leading to a spring. A fine one was found on our way to Magnolia. Our trip on the Bird River was quite successful botanically. At Bowerman's we found a very large spring and not far off two *Sagittaries* - *S. teres* Watson, & *S. nutans* Mx. var. *lanceolata* Chapm. On the opposite shore, I found *S. variabilis* Engelm. var. *gracilis* Engelm. On Sunday morning, we went to Dundee Creek. At the mouth of the creek I found a nice lot of *Chara*. At the head of the creek grew *Discopleura capillacea*, *Kortchitzkii*, *Sabbatia stellaris*, *S. chloroides*, and *Eryngium Virginianum* in the greatest profusion. The bottom of the creek, itself, was a veritable

\* On the mainland not far from the light-house, I found  
more of the Lippia lanceolata.

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paradise of water plants.

At Chain Station, we found plenty of Lycium Salicaria  
Hibiscus Moscheutos and Spiraea in cultivation.

At Turkey Point I again found a nice lot of Chenopodium.  
I was surprised to find Segettaria natans blooming under  
two feet of water. Is the plant, while blooming overtaken  
by the tide or does it really open below the surface of  
the water.

On Sue Is. I found the beautiful rounded nests of the  
Bumble Bee. Later, I found some on Rocky Pt.

On Turkey Shore, I found Ranunculus pusillus Poir. It  
was quite abundant.

While going around Norman Cr., I was surprised to find  
a specimen of Phlox growing on the shore.

At Clay-bank Point, I again found Lippia lanceolata  
in profusion. Here, too, grew a nice lot of Botrychium  
diversatum.

At Rock Pt. grow several  
Juncus Virginiana, one very much stunted; it grows  
right out from a fissure in the rock. An up-rooted  
Cedar with branches now perpendicular is also a  
vegetable curiosity.

On the North Point Rd, I found <sup>the</sup> curious stone, marked  
the ~~Thomas S.~~ Boundary between Thomas Shaw  
and John E. Howard 1820.

On the Mullin Island Light Rd I passed a very large  
Chesnut Oak more than 6 ft in diameter. Here too, I  
found a solitary specimen of White Cedar. In the sandy  
marshy region near the shore, I found Lobelia puberula Mx.  
My visit to the light-house\* was a decided success. From  
the top a fine view of Hawk Cove, Back River, the islands  
etc., etc., may be had.

At Sparrow Pt. I was pleased to find Polaris  
gracilens. Here, too, may be found Chenopodium Botrychium \*  
Salsola Kali in profusion.

Plants in bloom

*Anagallis arvensis*  
*Agrimonia*  
*Cornus Chamacensis*  
*Diurysma capillare*  
*Dryopteris*  
*Eclipta*  
*Eryngium Virginicum*  
*Gerardia purpurea*  
*Hydrocotyle*  
*Lycium lineare*  
*Mentha viridis*  
*Mentha piperita*  
*Hibiscus Moscheutos*  
*Monotropa uniflora*  
*Elephantopus*  
*Polygala*  
*Mollugo verticillata*  
*Lobelia puberula*  
*Ranunculus acris*  
*Sium cicutifolium*  
*Sagittaria natans*  
*Sagittaria variabilis*  
*Sabbatia stellaris*  
*Contideria*  
*Spartina juncea*  
*Rhus typhina*  
*Ternstroemia Canadensis*  
*Hydrocotyle*

*Abutilon Amnicola*  
*Chenopodium Batthy*  
*Cupress*  
*Dianthus Arvensis*  
*Epilobium*  
*Eupatorium purpureum*  
*Scum album*  
*Monticola*  
*Lycium Sabina*  
*Melampyrum*  
*Mentha*  
*Malva rotundifolia*  
*Minulus alatus*  
*Paspalum laeve*  
*Paspalum*  
*Pluchea camphorata*  
*Polanisia graveolens*  
*Lobelia cardinalis*  
*Stachys palustris*  
*Sagittaria tera*  
*Sagittaria var. gracilis*  
*Sabbatia chloroides*  
*Saponaria officinalis*  
*Spartina*  
*Spartina stricta*  
*Salvia Kali*  
*Tripsacum*

Aug. 13

Went to Brooklyn, to find *Piperis*, but was not successful. In the morning found *Cordylophora* on the plants at the Armadillo Boat Club.

I brought home the fruit of the Paper Mulberry, also twigs which I shall try to root. 3 of the twigs were put in wet sand with a glass over them; 3 in bottles, one blue glass, one amber, and one

white; and 3 in soil, covered with glass

Plants in bloom

*Lactuca bluminata* Gray.

Aug. 17

A trip to the *Asplenium Bradleyi* rock to search for *A. montanum*\*. This time I was successful. There is very little of it. A little (possibly 3 plants) on the side facing the road, and two or three patches (possibly 12 plants in all) on the side going up the hillside. It is a much smaller plant than *A. Bradleyi*, the longest fronds found being about 3 inches long, whereas the longest of *Bradleyi* were about 7 inches long. The stipe of *montanum* is brown only at the base whereas in *Bradleyi* it is dark brown its entire length extending over a short distance into the rachis.

Returning from Alberton we walked along the railroad tracks. Not far from Hollifields Signal Station, I found a nice lot of *Scirpus debilis* Pursh. It is quite a neat looking rush of a light green color, culms almost round, there being but a faint indication of 3-sidedness. Specimens were from 6 to 18 inches high.

As I was so close to the *Asplenium angustifolium* spot, I visited it. The cutting down of the trees here had a wonderful effect. The fronds are much thicker, more coriaceous, and more fruitful. In fact, whereas formerly there were seldom fruitful fronds now there are but few sterile ones.

I found a specimen of *Gaura bicolor* on the Johnny Cake Rd not far from Ben Run.

Plants in bloom

*Scirpus debilis* Pursh.

*Gaura bicolor*

*Vernonia*

*Elephantopus*

*Sabbatia angularis*

*Lobelia sylv. cardinalis*

*Asplenium Bradleyi*

*Asplenium montanum*.

*Asplenium angustifolium*

*Eupatorium ageratoides*

*Prickly*

Aug. 27 I went to-day for fox grapes which are now ripe. I could not have chosen the day better, a day or two later would have been too late for some. Grapes were secured in the following spots. At the branch, Furnace Br., just before crossing; at the spring; at the end of the path just as it reached the large stream; in the moist ground below the spring, near the new house; at the old furnace; and at Saw Mill Branch. Just a short distance beyond the spring, I found a Prunus Americana full of fruit.

Along Saw Mill Branch, I found many trees of Chionanthus full of fruit. This is the first time that I have found it fully ripe. The greater part of the fruit is occupied by the stone. It does not seem to be eaten by the birds.

Plants in bloom

Chrysopsis Mariana

Rhexia

Dulichium spathaceum Pur.

Eriophorum Virginicum, L.

Eriophorum cyperinum L.

Erigeron decagularis L.

Cassia nitida

Nymphaea odorata

Monarda fistulosa

Eupatorium perfoliatum

Eupatorium purpureum

Gerardia purpureum

Lobelia cardinalis

Solanum nigrum

Chondrilla juncea

Cnicus Chamacurita

Pontederia

- 30 Collected to-day specimens of Cheilanthes vestita Swartz. The rocks looked beautiful clothed with the pretty fern. In most cases, it was quite fresh, still in a few places, it was quite withered, no doubt due to lack of moisture. Besides collecting Cheilanthes I collected also specimens of Brickellia vulgaris, Woodia obtusa, Spiranthes gracilis and Gerardia pedicularis. The Spiranthes was found in the field just before entering the woods. The Gerardia was found near the Cheilanthes rocks.

- 31 My trip to-day was mainly to plant several specimens of Arethusa bulbosa L. sent to me by Mr. S. <sup>Swanton</sup>. Probably the best place for them would have been at Round Bay, and, had I not found suitable spots I would have saved the specimens till Saturday and taken them there.

Arrived at Waterford, I, first of all, ate my lunch and then proceeded to the fern region. Here, I collected a few specimens of Nephrodium Bootlii, N. cristatum, N. spinulosum var. intermedium and Woodwardia angustifolia. Obtusilobate forms of the latter showed an interesting (peculiarity) feature. The fertile fronds of this form have stipes of a dark brown color, quite polished; the stipes of the sterile fronds are of a light green color. Now I find that the stipes of the obtusilobate forms are various shades & amount of brown. Collected here on a tree-trunk a liverwort.

From the fern region, I proceeded to the pond. I walked along the shore whenever I could. Here I found Lycopodium flexuosum, Eriocaulon septangulare and Juncus Canadensis. I found several sphagnum covered spots and I decided to select one or two spots to plant my Arctostaphylos. As there were four plants I planted them in two different places. The first near two large pines about 4 steps away from them; two strings tied close to the ground, on near-by shrubs indicate the spots. The other two were planted near a quadruple chestnut near a fallen branch, one below it, and one with a Polygonum obovatum above. Not far from the spot where I planted the bulbs I found several Habenaria in fruit, no doubt H. tridentata. Near the head of the swamp is that large Prunella place. Innumerable seedlings seem to indicate that most of the seed produced this year has already germinated. I pulled up several of the seedlings, but in every case found the corn-like cotyledon already absorbed. The large mass of thick fleshy roots would seem to indicate that its energy is mainly directed to their formation. These in turn drag the plumule below the surface.

From the pond, I proceeded to Elvaston and then to Forest Home. On my way, stopped at the Lycopodium place and got a few specimens. The fronds of some are still uncoiling, some others, however, have attained their full growth.

Arrived at Marley, I felt in such good trim that I decided to walk to Centre Bay. On my way made a nice little discovery. On the left side of the road, a short distance beyond the road leading to the post-office I found a grove of White Pine. Mr. S. <sup>older</sup> told me he had found a grove on his way to Swan Creek no doubt, this is the same grove. As it was getting dark I did not stop to explore, but will do so in the near future. Quite a number of very large trees were observed.

Sept. 3. Through the ravine and along the River Rd. Just beyond Valiant, I was pleased to find a nice lot of Desmodium Marylandicum Benth. It was a nice find; I do not remember seeing it before. In the ravine, observed some peculiar fronds of the Christmas Fern. There were quite many of them, but none fertile. All the plants seemed to be young, probably that alone accounts for the peculiarity. I noted the spot. It was on the right bank of the brook, close to the beginning of the first highland. I stopped at the Tipularia place near the spring. One of the plants had a spike of capsules. I marked it by tying a string around it near the base.

At the Cascade I examined the rocks most carefully, I hoped to find some rare ferns, but was disappointed. Nothing rarer than Aepulum Trichomanes, which was quite plentiful here, was found.

While on the River Rd, I secured some fine Marchantia, still in good condition. Here, too, I found a few plants of Cardamine Pennsylvanica Muhl. This plant is frequently confused with C. hirsuta L. The former, however, is very leafy.

7 A trip with Mr. S. <sup>older</sup> across "The Caves" and through the pretty ravine north of Stevenson. As we crossed the fields, we came to a small pond, caused by water filling an abandoned iron ore quarry (?). We were pleased to find here, where the water had corroded the bank, numerous garnets. They were of various sizes, and variously corroded. We found that the garnet region extended over considerable surface. We came to the corduroy road. Just as we were going down the hill to the brook we found the garnets again. A piece of rock containing them was picked up, from it, we got quite a number of nice specimens.

It was just before we reached this point, that we entered the field on our left and stopped to examine a Prunus <sup>vide below</sup> Americana, and a Pyrus coronaria. We reached the foot of the hill and the stream. To-day we decided to go down on the right bank. Just a short distance from the crossing is a fine spring; here, we stopped to eat our dinner. Here too is a spot where <sup>pitella</sup> Chama grows. It was not in good condition, but, no doubt, is in proper season.

On our tramp through the ravine we kept a sharp look-out for mushrooms. Cortinarius is now out in full force. The following species were found C. violaceus, C. annulatus and C. lilacinus. The <sup>most to the</sup> last was most common. It is of a yellowish color. The gills are yellow but turn to a cinnamon color. C. lilacinus was also fairly common. The button stage is remarkable in having the bulbous base of the fungus being larger than the expanded pileus. A beautiful Boletus was found. It proved to be Boletus scaber var. fuliginus. A fine specimen of Amanita rufoa was also found. But the best find of the day was a nice lot of Polyporus sulphureus. It grew out from a fallen tree trunk.

The rocks and fallen trees that we passed were beautifully covered with mosses, liverworts, lichens. Days might be well spent examining them. One pretty liverwort was found on the trunk of Kalmia latifolia. These latter were the largest I have as yet seen.

When we returned from our trip through the ravine we walked along the new road. At the first bridge we came to we found another Prunus <sup>vide above</sup> Americana. The bridge is the first one east of the road.

As we walked along the road we discerned the appearance of Sitaris glauca and how to distinguish it from S. viridis. We observed that the spike of glauca is yellowish brown & perfectly erect; that of viridis is green and drooping. Later, too, we passed a field where we not only had S. glauca & S. viridis but also S. Italica. We found here spikes of both glauca & viridis & much thicker than ordinarily. Could they have been affected by

the Italia? Just as we were about to leave "The Caves" for the road we passed through a chestnut grove. Here we found a nice specimen of the Beefsteak fungus, Pictulina hepatica. One peculiar looking specimen was picked up, which we suppose was the same fungus attacked by another. When torn open, it was found filled with water.

On the road leading to the church we found Scleroderma bovista. As we passed through the fields we saw frequently specimens of Solidago where the heads of flowers had reverted to leaves.

Sept. 10 To-day, I started from the terminus of the Dickeyville electric line and proceeded along the falls to Gwynn Oak Park. Not far from the stone crusher was a large patch of Commelina. According to B. & B. it is Commelina communis L., my specimen having but four seeds; however, according to Gray, & also Wood it is more likely C. nudiflora L. Just as I entered the village I found some nice specimens of Artemisia Abrotanum. I collected several specimens. When I reached the second fence, I walked up the hill a short distance to the abandoned quarry; here I found some specimens of Selaginella sp.

Arrived at Gwynn Oak, I entered the woodland on the left bank. On a former trip, I had observed some rocks here, not far from the stream. I wished to examine them to-day. I searched carefully, but failed to find them, although I found the old ruins, seen on that occasion. I examined these carefully, & on the old walls found Cystopteris fragilis. I did not recognize it at first, it was so different from the specimen I have observed. Just beyond, along the old dam, on the hill-side I found Corallorhiza odontorhiza fairly abundant. I now proceeded towards the main stream, and here, in an abandoned clay pit, I found Chama. From the park, I went to Gwynn Oak station. Not far from the station, beautiful specimens of Chelone glabra may be had.

12. With George to Lock Raven, Islen Ellen, etc.

On the pretty estate at Endoville (?) I found two specimens of Juniperus communis growing. I consider it an important find.

From Mitchell's mill, I walked along the rocky hillside, I hoped to find

\* Not far from trough found Fritularia hepatica on dead stump  
and, not far from the dairy I found several fine Polyzonus  
sulphureus.

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\*\* The spores were decidedly yellow.

something new on the huge boulders. Nothing, however,  
was found.

At the spot where we ate our dinner I found a number of  
peculiarly formed mushrooms of a white color and a strange  
odor. I have not as yet determined them.

On the hill-side beyond the water trough\* I found Anthoecum  
laevis L.<sup>\*\*</sup> most abundantly and beautifully printed; here too, I  
found Kantia Trichomanes, S. F. Gray

16 I found a nice lot of Chelone glabra on the trip from  
Bonnie Base to Walbrook. Some before reaching Franklin  
Rd and some on Franklin Rd. Chepodeya striata grows  
most abundantly and beautifully in the little ravine that  
is passed through. It forms immense carpets.

20 Collected to-day on the River Rd several fine specimens of  
liverworts. The buds of Centraea cinnata are becoming  
quite large, none of the plants in flower as yet.

While collecting the liverworts found a peculiar gelatinous  
fungus growing on the soil with them. While collecting  
Marchantia polymorpha which is still in fruit, I found  
several peculiar reddish brown bodies growing on the ground  
with them. I collected the liverworts on the rocky hillside  
near the old Avalon bridge. Among them were Scapania  
memorosa, S. undulata, and Lioclaena lanceolata (?).

24 My intentions were to go from the Rolling Rd to Union  
Dam Pump House, but, for some reason or other, I missed  
the path and before long I did not know exactly where I was.  
I, therefore, after a vain attempt to find the path, made  
my way in the direction of the Patapasco. I soon came to  
a path leading, as I thought, in that direction. I followed it  
and it brought me to a fine brook. The path crossed the  
brook and led to a large field. When I came to the  
brook, I decided to follow it to the river. Seeing no  
path on the left bank, I crossed it, and on the right  
bank, found quite a broad path. The path was broad and  
a very pretty one. I soon came to some rocks, and here, I

was most pleased to find Chilanthus vestita. It was growing quite profusely. I proceeded along the path and soon came to the spot where it crossed the brook. I observed that here was the junction of two brooks, the one I had been following being the smaller of the two. Here I found a large rock, growing on it, was more of the Chilanthus. Here, too, I found a peculiar form of Sarcocolla with leaves of a fine velvety texture. I do not see it described in any of my books. If undescribed, I should describe it as Sarcocolla officinale var. molle. I proceeded along the right bank of united stream now. On my way passed, a rock covered with Campylopus rhizophyllus, also much Corallorhiza odontorhiza and a single specimen of C. multiflora. I soon observed that I was not on the stream which passed the pump-house, but how far I was from it, I did not know. When I reached the river I saw that I was opposite the north opening of the tunnel.

One reason for making this trip to-day was to find the fruit of A. Dracontium, but not knowing whether I was above or below the locality made me undecided which way to proceed. I decided to go towards H., but after proceeding a short distance and meeting a fisherman who told me how far I was from the pump-house, I decided to return. I did wrong, for I thus missed finding the plants. When I had returned as far as the brook I stopped to eat my lunch and then proceeded towards O. I did not find the A. Dracontium but I did find a tree with several fine Papaw. The fruit was remarkably large. When I reached the dam, I went along the race path. Meeting some work-men who were repairing a leak in the race, I stopped a few moments to chat. One of the men told me that he liked the Papaw, that it was a good blood medicine. "The green fruit," he said, "has the taste of a raw sweet potato, but acts very badly on the system". He called the Judas Tree also the Pearce. He said the flowers were good to eat. The men told me, too, about the would-be suicide. The man had tried himself so as not to be carried away by the stream, and then fired 3 bullets at his head, none of which did

any decided injury, the balls not penetrating the skull. He was found semi-conscious stretched out on the bank of the race, his head only, out of water. This happened 3 weeks ago, the man is now nearly well.

From O. I proceeded to E. C. and from there to I. and then to O. G. At Helixton, I found two large Kentucky Coffee-trees before the residence opposite the mill. And just beyond the old railroad bridge, I found Crataegus coarctata flabellata in fruit. Found also on road between E. C. & I. albin flowers of Elephantopus. Just after passing O., just beyond the mill on the left side of the road I found Anthracinus punctatus (?) growing on a rock. I put some specimens into alcohol. These spores are black.

Sept. 27. Repeated a portion of last Saturday's trip with the intention of finding both Arisaema Dracontium and Acimonia triloba; this time with success.\* I observed to-day where I had gotten on the wrong track last trip. This time I went directly to the Pump-house. On the rock near the dam I found Chilodactylus verticillatus and on a tree near by Fraxillaria squarrosa? Here I ate my dinner. After dinner I continued my trip, up the river, towards Hollofelds. This time I found the fruits of Arisaema Dracontium. It was well that I had marked my specimens, otherwise, I would not have recognized them. I observe that there are fewer berries on the spadix than in the case of A. triphyllum and most of these are deperispermous. I observed too that the spadix is rather spongy. I now continued my trip towards the "Shades of Death". It was a pity that it rained for the foliage was very wet and I soon became quite wet and I felt once inclined to retrace my steps. Nevertheless, as I was anxious to find a few Papaver, I decided to keep on. I examined every tree but it seemed as if there were none to be found. I kept onward, however, and right where the path approached the river, I found several trees laden with fruit. On the ground, too, was a lot of the fruit which had fallen. A few seeds here, showed that the fruit


\* Found the Witchhazel in bloom.

\* On my way out Washington Rd, found several plants of Crataegus coccinea var. macracantha (vide Sept. 27.) and at the swamp cor. of Sulph. Sp. Rd I found the fruit of Symphlocarpus foetidus. The tips of the new plants were <sup>evergreen</sup> visible.


is eaten by some animal. Just as I was examining these seeds it began to rain again, this time in torrents, of course, I was washed.

When I reached H. I took the Johnny-Cake Road\*. This is the first time I have ever been on this road. One little discovery was made. On the left side of the road close to a pecan tree and not far from a Juniper, I found a fruit specimen of the Crataegus coccinea var. macracantha. A short distance farther, I passed a stump on which grew Polyporus sulphureus.

During the morning I found quite a number of mushrooms of the genus Armillaria along the path to the pump-house. They were of yellowish-brown color. They all had a beautifully formed, prominent annulus.

Sept. 28. Found on the lawn in front of the college Coprinus atramentarius also one of a beautiful lead color, 2 to 3 inches high, pileus 2 in. in diameter umbonate, edge turned up slightly.  Two or three were generally growing together. The plant does not decay quickly, being somewhat leathery. The stem is stuffed. I think it possibly a species of Tricholoma.

30 One of the best finds to-day was a fine large clump of Armillaria mellea on the avenue leading to the Sugar Oak Avenue. On our way through the woods I found in several places clusters of this fungus. I believe the Armillaria found on the 27<sup>th</sup> also A. mellea, it, however, had not the blackish scales on the top of the pileus.

Oct. 1 "I observed, to-day, the progress on the fish ladder at Avalon, I do not wonder at its cost being over \$800. It rests in a solid foundation of concrete. I went to Kentian Place and found the few plants in bloom, they were just beginning to bloom. I think this is to be a poor year for them. They are not at all plentiful, neither here ~~now~~ now at Kentian Hills. Why are they not plentiful this year? The summer seemed to be almost last summer repeated. I shall see how the plants fared at Lutherville before examining closer into the matter. On the hillside, at the base of Kentian Place, I found Anthracium in abundance. Upon examination I found, many small flesh-like processes, covering the upper surface. Under the microscope I found them shaped somewhat like this . The flesh-like body was filled

with a great many large globular bodies. I think the flask-like body the anthridium and the globular bodies were the sperm cells. At the *Dicentra* spot I found quite a number of *Peziza aurantia*. These little fungus growths are quite pretty. They are shaped somewhat like little shallow cups or saucers, & are of a pretty orange color. They seldom exceed half an inch in diameter. When I had crossed the Patapescu by way of the hanging bridge Katherine, I, to-day, decided to take a new route, so continued along the road instead of climbing the hillside to the tracks. Right at the viaduct I found a nice plant of the *Pig*. The road took me through St. Denis and finally to the Washington Pike. I then took the path leading to the B & P. tracks. Arrived there I examined the low ground along the branch. Found *Polygonum arifolium* & *P. sagittatum* in abundance also more *Peziza aurantia*. From the B. & P. tracks I proceeded to the B & O. tracks and then started for home. On my way I found a nice lot of *Tanacetum vulgare*. It was 7 o'clock when I arrived home.

- (Oct. 4. To-day, I found an almost fully developed spathe of *Symplocarpus foetidus*. I broke it off but was afterwards sorry I had done so for, as it was not yet fully developed, it would have been interesting to note when the flowers would be in bloom. On a decayed trunk in the bottom, I found *Pleurotus*. *Eucrymum* was found in fruit. A nice find, however, was a nice lot of *Utricularia perfoliata* with perfect green leaves on the top of the hill, left side of ravine, near the field. Here, too, I found nice specimens of *Smilacina racemosa*. Near the hut grew a great deal of *Conium* or *Day flower*.
- 5 I find that *Coprinus micaceus* is again appearing at the base of several trees near the W. H. S. In the garden next to 1225 McCallough St. is a fruitless tree of *Ailanthus glandulosa*.
- 7 On this trip I was pleased to find a tree of the *Hop Hornbeam* *Ostrya Virginica* on the left bank of the race, a little south of

Baltimore Street.

Oct. 8 To Lutherville. The Gentiana crinita meadow just north of the village was cleared during the summer. I feared that the gentians would, therefore, be a thing of the past, but fortunately, no harm has as yet been done. They were very abundant, in fact, they are more abundant than they have been for several years. The prettiest were on the north side of the track. Here several spots were blue with the handsome flowers.

I found to-day for the first time Spiraea lobata, in fruit, but recognized by its handsome peach-like leaves. It is quite plentiful, and I will have to take a trip there next June to see it in bloom. I visited the spot where I last year found Pedicularis lanceolata, it was still in bloom, but not at its best. I will try to visit it somewhat earlier next year.

In the afternoon, I visited the Chara pond at D. H. P., failed to get any of it.

11 Along Gwynne's Falls from Edmondson Av. to Gwynne Oak Park. I kept on the right bank of the stream. On one of the willow trees I found a species of Trullaria, and on the rock, that pretty one just at the foot of the little hill before reaching Franklin Rd., I found two more liverworts Lejunea (?) and Radula complanata Dumort. When I reached Gwynne Oak Park I went to my Chara pond. This time I took a long stick and dragged it through the water near the spot where I had found it on my first trip and brought it to the surface without any further trouble.

From the pond I went by way of the little path to the old ruin where the Cystopteris grows towards the car barn and from there to Gwynne Oak station.

15 The trip to-day was to Chair's woods, with Woman's College girls, aboard the Delight. The wind was rather fierce and so it was after two P.M. before we made our landing. Having landed, I proceeded towards the lowland north of our landing. Here I found growing thickly around an old stump a fine colony of Hypholoma sublateritium Schaef. I saw at once that it belonged to the purple-brown-spored agarics. Not far from the stump.

\* growing on the ground.

\*\* There were as a rule but one seed (fruit) on a peduncle, however, two are occasionally found.

at the head of this one-time inlet, in a rather moist spot I found Kantia Trichomanes fructed\*. Growing on a rotten stick, I found, Seocalyx granulosa Nees.

I now walked across the bluff to the low ground south of our landing. At one spot found Pallavicinia with anthridia.

- 18 To Gentian Place. To-day I examined again the banks of liverwort, looking so much like Anthoceros and which I, at first thought must be it in one of its stages. To-day, however, I determined it and find that it is Blasia pusilla. I found also a great deal of a certain liverwort, which may possibly prove to be Jungmannia Schrad. It covers the soil on some of the rocky hill-sides, with it were also a species of Radula and Scapanis nemorosa. While walking along the River Rd I came upon a large snapping turtle. It was more than a foot long; its carapace was more than 6 in long. To-day I took the road through St Denis and to Washington Rd, then across the fields to the B & P. R.R. and from there to Monumental.

- 22 To Washington. Found to-day the Sinkgo in fruit. It is of a yellowish brown color, and attached to the tree by a long peduncle. On the peduncle, close to the fruit may be seen a little knob, the remains of the other ovule\*\*. The fruit now fully ripe is shaped somewhat like a plum, is more than an inch in diameter and is attached to a peduncle about  $\frac{1}{2}$  again as long as itself. They are rather soft, and <sup>have a peculiar odor</sup> when ~~crushed~~ <sup>they</sup> are covered with a thin watery liquid which exudes rather readily. The odor is that of butyric acid and is <sup>very</sup> pronounced. A large seed occupies the centre of the fruit. It is fully  $\frac{3}{4}$  size of inch long and approaches somewhat in shape, that of the fruit. At first sight it might be taken for the hard kernel in a stone fruit, but the seed covering comes off readily. Cut open one finds a small embryo and copious endosperm. The embryo has two fleshy cotyledons. The endosperm is somewhat convoluted, greenish toward the perisperm outside but white inside. It is rather soft, and its

taste is fairly pleasant.

In the afternoon I went to the zoological park. Here I found the Red Oak Quercus rubra, Symphoricarpos vulgaris, Juniperus communis, English Maple,

From the park, we went to the Chain Bridge, after a short walk into Virginia, we went a short distance along the tow-path. Here I found Verberna occidentalis.

Oct 25 This morning went to the foot of Hanover St. for Springer, found the pond on the east side of the street well stocked with Hydrodictyon. Water-net.

Visited the Pine, White forest on the road to Marley. I found it of considerable size, containing trees of all sizes. Some of the largest were about 30 inches in diameter.

Visited also the Lycopodium near Forest Home. The plants now look at their best, and a good picture might be gotten of them. There are, however, very few good herbarium specimens, as most of fertile pinnae are already brown. I managed to secure three good specimens. Spores are already ripe, and are easily shaken out from the brown pinnae. I collected a few for experiment also some soil which I felted dusted well with spores.

26 Planted spores of Lycopodium. Some in washed sand, and some in the soil. Also some in a closed vial.

29. Found an abundance of Blasia peruviana on the way to Mitchell's mill. June 10.

30 Observed to-day that the Ginkgo seeds do not smell so strongly of butyric acid, that the odor is more ethereal.

The taste of the flesh is still disagreeable, rather sharp. The endosperm is quite green, possibly chlorophyll.

Nov. 1 To Brooklyn. I looked up the Tipularia localities. Found the plants fairly abundant. Along a little stream found two pretty Limnoria.

5 To the ravine. To-day tried to find the Lilium Philadelphicum spots. Took the right hand path and found that it led to the ravine of Camp Run. Here I collected some fine specimens of the Christ-

mac Fern. In the brook growing on the rocks Porrella pininata L. was found, and on a piece of bark P. platy-  
phylla. A pretty little Myromyces with yellow spores  
was found in several places on dead decaying logs. Also  
a small <sup>puff-ball-</sup>~~mushroom~~ like one.

After dinner I strolled through the woods, hoping  
that I might possibly find the old trunk near which  
grew the Phila Lily. After strolling for some time  
I came to a path. I decided to follow it. It took  
me to the locality where Myrica cerifera grows. It  
gave me a great deal of pleasure to find it for I  
had been looking for the spot for a number of years.  
Here, too, I found some fine specimens of Pedicularis  
lanceolata, also specimens of Spiranthes cernua. This  
spot is a beautiful one and will certainly have to  
go to it soon again. So as to be sure of finding the  
place again I blazed the trees on my way out.

While trotting through the woods, I found a nice little  
patch of beautifully printed moss growing on the ground.

- 8 Election Day. A trip to Brooklyn. Brought home two  
Lewinworts - one Geocalyx graveolens.
12. Repeated some of the trip of Nov. 5. I again entered the  
road at the foot of the stone wall. To-day I followed  
a path, which seemed entirely new and yet it took me  
to Fox Run. As I failed to recognize the route and  
so as to be sure of finding it again in the future  
I marked my way back by cutting the trees on my right  
hand. This route takes ~~up~~ me past the pine woods,  
here I found Pyrola, and then to a steep hill. I  
failed to recognize the route as any that I had ever  
been over until I came to an old fallen tree and  
soon after to Fox Run. After knowing where I was,  
I retraced my steps and looked for the blazed route  
of last Saturday. I found it, with a little trouble,  
and soon came to the Myrica cerifera locality. I now

\* *Pogonatum brachyphyllum*.\*\* *Nardia crenulata* & *Cephalozia multiflora*

marked a number of trees to the run and then followed it. I was very much surprised to find that it was Fox Run that I was following.

On the trip secured a number of fungi and a few liverworts. One of the fungi I think is *Metulium* another showed *guthriei* beautifully. A species of *Hydnum* had begun its existence while the dead trunk stood upright. When the trunk fell the spore-bearing surface no longer faced the earth, but was now perpendicular to it. The fungus continuing to live began to form its new spore-bearing surface as it was wont to do, and was now perpendicular to its old last year's surface.

One of the liverworts found was *Rachula complanata*.

Nov. 15 Went to Brooklyn for *Phaeococcus*.

Learned to-day at the Field Club meeting that *Calopogon* is very abundant in the swamp near Mt. Wenianus where grows the *Habenaria ciliaris*. That *Arctium* grows in the triangular area formed by the tracks of the B & O. and the A & B. & L. and that *Habenaria pycnostachya* is to be found below Dunderberg on the right hand side, in some of the little inlets.

- 19 Arrived at Robinson's, we proceeded towards the boiling spring. On our way we stopped at the *Schwinitzia* place. Quite a number of clusters of the pretty plant were found peeping above the pine needles. Here, too, were many mushrooms, also just peeping above the ground. From the *Schwinitzia* place, we went to the boiling spring. On the way picking up a number of mushrooms. After dinner we went to Round Bay. On the way back I secured a nice specimen of *Pogonatum*\*. At R. B. we went to the *Saxamin* place and then over to the Cranberry swamp. A number of ripe berries were still found. Here, I found a few liverworts\*\*. We now went back to the station and here we awaited the early train. While waiting a man came past with oysters. U. bought a quart, <sup>three</sup> ~~which~~ we enjoyed very much.

At Bent Oak, I looked for my transplanted Diomer, but no trace of it was visible.

I find that the mushrooms growing with the Schweinitzii are species of Tricholoma, they have a brown pileus. An occasional one with yellow pileus was also found.

In the woods at Bent Oak Clitocybe, no doubt, C. candida, and a species of Hypopholoma, not H. melles although very similar and a great deal of a species of Microglossum were observed. Here too, I found Dadactia & Lycogala.

- 22 To Brooklyn. Transplanted my specimens of Schweinitzia\* near the old house. Marked the locality very well. Take the road leading through the little ravine. At the marked tree on the hillside turn in to the left, to the path, follow this path to another marked tree, here one plainly see the remains of a two-pronged stump, here between two pine trees (each blazed) were transplanted the best specimen. The other specimen was planted near a large pine a short distance away, between it and a small stump. This large pine was blazed & is the one towards the southwest of a group of four. A number of trees showing the way to this tree were blazed.

On the road to the house, not the one in the ravine, but the one to the house, I found a great deal of Belactrus scandens. On the bank of the stream I found a fruited liverwort Pogonatum brevicaule. <sup>the north side of</sup> was found very plentifully along the road <sup>being the north</sup> side. On the north side I found close to the old willow some Clematis.

Afternoon. Found Cladophora in the run (Dead Run) a short distance beyond the bridge.

- 24 Two interesting finds were made to-day. First a nice lot of Clematis along the run before reaching Ben's Run.

Second plenty of Nuphar lupulus along the Patapaw from Hollifields south, to Union Dam. Near U. D. is a lot of Equisetum hyemale.

- Nov. 26 A trip from Hamilton to Carney to the Sumpowder and then down stream following the left bank. Just beyond C. on the left side of the road, I found a lot of grass, which reminded me very much of our cane. I will, however, have to make another trip to fully determine it. When the road crosses the river it follows the left bank a short distance. Right at the bridge a large boulder made road-making in that direction impossible. On this rock, I found several beautiful patches of Chiranthus. I have two green Woodrue obtusa and a beautiful deeply cut variety of Asplenium cheucum could it have been the var. Hortoni? Along the river side of the road grew immense patches of Corydalis. Here & there, too, I saw some Hemlock Lupulus. To-day, collected many specimens of our woody fungi. On one boulder found a nice patch of the Walking-beg Fern.
- 29 Observed to-day that the Maples particularly the Eng. Maple, were not in fruit. Last year both Eng. Maple and Sycamore Maple were heavily fruited; this year, I find no fruit on the Eng. Maple and only a few on the S. Maple. Observed in Brooklyn the same with the Norway Maple. Last year there was plenty of fruit, this year, there is none. Found two interesting fruits, one apparently a legume<sup>(?)</sup> and the other a labiate<sup>(?)</sup>.
- Dec. 3 On trip to-day from the Wilkins Av. terminus to Arbutus, to Avalon, to Orange Grove, to Catonsville, I secured a nice lot of acorns, some in the woods near the Wilkins Av. bridge, some on the Cannon Rd near Whitish and some in the wood below the last house on Wilton Av. On Cannon Rd I got some good hickory nuts and in the woods on my way to Hamonia I found several good chestnut burrs. Found Hypophloeum mellicae in several places; notwithstanding the cold, it seemed still in good condition. At Gentian Place, I secured some Gentian seed for experiment. From Gentian Place, I went to the fair peremissum place, the tree was laden with fruit as usual.

I did not succeed getting any walnuts, these fruits seem to be unusually scarce this year.

On my way up Hilton Av. found the same Linnaea (?) which I found in the fields <sup>beyond Hollandside</sup> on my Thacker's giving trip. I will try to determine it? Can it be Ricin?

6. Went to Lutherville to get seed of Gentiana crinita <sup>the</sup> but a nice supply. Found still a number of plants in bloom. On my way to Pocom observed a Kentucky Coffee-tree before the house of Dr. Duncan just below the church at Bonaston. Beyond the station at Timonium, almost opposite the fair-ground entrance grows a nice lot of Hibiscus Pinnatus.
- 10 Some fine specimens of Daedalea were found around the base of a decaying tree stump.

- 17 Secured a nice lot of perennimones from the tree near Hanson's. Observed tracks of animals leading to the various perennimone trees which I passed, no doubt raccoons.

Secured several fine Polypori from a willow on my way along the River Rd.

Snow has been on the ground since Dec. 5<sup>th</sup>

Arrived at Catonsville about 3 P. M. Proceeded at once to Clifton Park. Here I learned that the peculiar drupelets observed on my previous trip were the fruits of Rhodotyphne kerrioides; and that the little legumes were those of a species of Amorpha.

31. I repeated to-day a portion of the trip taken with Mr. S. during the summer. My trip to-day was from Forest Park out Liberty Pike to Guyana Falls. Along the falls to Scott's Level Br., then to Howardville & home by way of W. M. R. R.

I collected several kinds of woody fungi. Two were growing on carpines, dead trunks; one on white oak; one on a decaying log; and one, Schizophyllum, extraordinarily large, on an oak.

I was pleased to find Corylus in great quantity, also a species of Pleurotus possibly P. sapidus, just as fresh as if it were much earlier in the season. On my way to Howardville, I passed several Ailanthus trees laden with fruit. The meadow near H. had hundreds of plants of

the Sensitive Fern; I think the spot worth visiting during the summer. Near Scott's Level Br. I found Clematis Virginia in great abundance.

1905.

Jan 2. The weather these past few days seems to be just perfect for our liverworts. On my trip to-day, through the little ravine near Brooklyn and then along the river I found several beautiful patches of these plants.

Pleurozia capidua was again found, this time a pretty patch in the ravine. In Brooklyn I observed Schizophyllum on the decaying Maple trunk where last summer I found Coprinus micaceus. Here, too, in the exact spot where the last named fungus was growing I found some very dark almost black, knob-like fungus-like projections. I shall observe these occasionally and learn what becomes of them.

Skunk Cabbage is in bloom. While searching for some specimens I found on a fallen <sup>tree-trunk</sup> some beautiful specimens of Daedalea, they were the largest & prettiest I have yet seen. The fallen tree was lying close to the hill-side.

I also found a pretty patch of Tipularia, consisting of 23 plants. I marked the spot where it grew. It was near the outer edge of wooded region, several large trees stand near by, but the patch is about midway between 2 marked young trees.

Plants observed in bloom

Poa annua L. (3)

Symphlocarpus foetidus Santib. (4)

Stellaria media Smith (2)

Taraxacum officinale Weber. (1)

7 A trip to the marshy head of Arundel Cove.

I found the locality quite interesting and worth visiting again in the summer. In one spot I found Acorns Calamus growing. I found to-day my first specimens of those gelatinous fungi Anicularia. To-day, I again found ~~the~~ same slightly gelatinous yellow-headed fungus growing on the bark of a decaying tree, that I observed last Saturday.

- 14 I secured a moss from the bark of one of the willows in the willow region near Patapasco. (north bank of river). Here, too, I found Pleurotus rapidus on several of the trees. The willow gardens, I passed through on my way from Patapasco to Pumphrey's may prove interesting this summer.
- 17 Paid a visit to-day to my coltsfoot patch and was very much surprised to find the whole place torn up as an electric plant was in progress of being built. The wind was very strong and out in the open it was quite disagreeable.
21. On the path to the Pump-house at Union Dam I found plenty of what appears to be Kantia Prichomenia. Here, too I found Pogonatum in fruit, also. At the second stream I found another liverwort on rocks in the stream.

I undertook this tramp to-day in order to secure a specimen of Arisaema Dracontium. I went to the marked place and after searching a little I found a withered fruit stalk. After digging a little I found a peculiar looking root stuck about 5 inches below the surface. It stood up-right in the ground, was about  $4\frac{1}{2}$  inches long and nearly  $\frac{3}{4}$  inch in diameter. Could it have been the A. Dracontium? Shall see this spring when the plant will be more readily found.

When quite near the region called the "Shades of Death" I found several large Polypori rather leathery in consistency and of a black color. While examining them I detected a faint violet-like odor. It no doubt came from the fungi. At one place, too, growing from the upper surface of a huge fallen tree trunk, I found a peculiar gray-colored fungus. When I first saw it, I thought it was the remains of a large hornets' nest for it had the same color. When examined more closely, I observed that that the fungus had the consistency of clay, it was as if it had been made of kaolin. It might be well to visit

\* Mr. Fisher tells me that the little bird with the crest is the Golden Crowned Kinglet and the other is the Carolina Wren.

this again early next fall.

Jan. 24. A number of fine Liverworts were found in the soft soil along the river. Three in particular were very interesting. In a spot where there was flowing water I found a thalloid form which I thought might prove to be a species of Aneura, Dr. G. thinks it a species of Pellia. So will have to wait until it is in fruit before I can settle the matter. Growing with it was quite a lot of Chiloscyphus polyanthos, I thought it might prove to be Porcombronia. A nice lot of Odontoschisma prostratum was also found. I have ~~all~~ been taking this to be Nardia acuminata.

Feb. 1 Branches of Alder collected a week ago are now in flower, and those of the Red Maple are expanding.

11 Two birds\* were observed to-day picking worms out of the decaying wood. One was a little bit of a thing, possibly half the size of our English sparrow. It had a pretty little <sup>red</sup> carmine crest and its wings were tinted with yellow. It was of a light drab color. The breast and under portion of body being much lighter than the top. The other bird was a trifle larger, had quite a long beak; it too was somewhat darker in color. The head particularly was quite dark and behind each eye there was a long narrow streak of white. It held its tail quite erect and I noticed that underneath it was mottled.

18. I was surprised to find, one breaking off a twig of Juglans cinerea a large supply of asp.

My best "find" to-day was the finding of several fine pistillate trees of Hilanthus glandulosa near Ilchester. Close to the road are two trees growing close together and near the bridge is another at the base of the little cliff arising from the flood-plain. I observed that the fruit is developed from the first two or three buds at the apex of the branch. When the fruit is ripe these branches break off leaving prominent scars and the (main) branch is continued.

upward by the development of the bud immediately below the last fruit scar. This tree like many of our trees has pseudo-terminal buds, and they in developing continue the stem onward. The leaf-arrangement is on the  $2/5$  plan. I brought home some fruits to grow a few seedlings, also a few cuttings from the fertile trees for experiment.

- 22 Observed to-day, for the first time that the buds of Calactum scandens are protected by a somewhat prickly excrecence around it. Shall observe again and examine more particularly.

Observed also that the stems bearing fruit of Pecoma radicans do not winter-kill so readily as the sterile branches.

- 25 I was surprised on reaching the White Pine forest to find so many of the trees cut down and split up into cord wood. I entered the woods to learn more about the cutting down of the trees and also to secure some twigs for microscopic material. I soon observed that some of the wood had been trimmed into timber suitable to vessels and some into long pieces that I thought might be for a new hut; found, however, no trace of the building. Saw in one place that a fine tree more than  $2\frac{1}{2}$  ft. in diameter at the base, had been cut down. It occurred to me to calculate its age. I found that it was about 75 yrs. old. What interested me, however, most, was to learn that the sap wood was 20 yrs. old. In a trunk of smaller diameter one 50 yrs. old, I found the sap-wood 18 yrs. old. Just as I left the woods I met a negro, going out the road. I asked him who owned the woods, and I learned that they belong to a Mr. Long a yacht builder, and that whenever he has a boat to build, he cuts down a tree or trees for the timber. I soon learned that the colored man had a little knowledge of it.

\* Examine alder during spring

\* Had the sun been shining, it would have been open.

plants found in the vicinity. He told me it was white pine that was being cut down. So I asked if he knew where there was more of the same kind. He told me there was plenty in Prince George Co., and also some on the Severn below Annapolis. He knew two, Adam & Eve and said it was collected for "good luck". I believe though his Adam & Eve is our Tifularia. He described the root correctly but told me that the plant had two leaves; he said too that it was found only in the fall.

Close to Manly, I found a number of pretty moose on the right left side of the road.

Arrived at M. I proceeded to Forest Home and secured a few fronds of the Lygodium. It is still conspicuous. From Forest Home I went to the dam; I wished to get some seed of the Pitcher Plant but found that it had all been disseminated. On way to B. found Drebe almost open.

Feb. 28 Observed to-day the pseudo-terminal buds of the elm and also those of the beech. Observed also the same in Paulownia. I must, however, examine this again.

March 4 I made especial effort to-day, again, to examine various tree buds. Observed that the following have terminal buds: hickory, tulip tree, magnolia, and alder<sup>44</sup>, and the following pseudo-terminal buds, sycamore, ~~honey~~ locust, and sumachs. The scar left, when the immatured terminal portion of the ~~stems~~ drops off, is plainly visible in these stems with pseudo-terminal buds. The sumachs with their leaf-scars and rather thick stems show this scar best.

While in Brooklyn I visited the maples with those peculiar fungi in winter condition. They are still as when last observed. To-day I took a few pieces with me for experiment. On the road to P. I inoculated two old stumps. Both were on the left side of the road, one just before reaching the bridge was inoculated on the north side, the one however, beyond the bridge was inoculated on the south side. A short distance beyond the "old house", just beyond the little

stream that crosses the road I found a fine patch of Tipularia containing about 30 specimens. Here too, was a large place with Symphlocarpus.

Just before reaching P. and immediately after crossing the last little stream that crosses the road, I entered the field to the left. I soon came to a little stream and a thicket. Here I found a rather slimy green substance covering the water. I brought some of it home. I find in the slime a great many green bodies probably spores. From another stream I secured some green algae.

- 7 Continued my observations on buds: observed that the following had terminal buds: - Dogwood, Maple, Ash, Oak, Viburnum, <sup>Walnut</sup> "Sassafras"; of pseudo-terminal buds, I observed the following: - Persimmon, Hazel, Birch, Dirca (?) Elm, Ailanthus Kentucky Coffee-tree, Willow.

No eggs of Salamander were found in the little pond.

Symphlocarpus foetidus is in full bloom at Owl spring.

- 11 On my way out the old Annapolis Rd, I stopped to examine the buds of Populus. They are apparently pseudo-terminal. This is what one would suspect, however, it is well worth examining in the fall or the winter.

When I reached Turner Br. I entered the thicket on the left side of the road and kept a sharp look-out for limnates. I was surprised to find Orontium aquaticum well up out of the water, the spadix already quite yellow. It was here, on the bank that I found plenty of Bazzania trilobata. Mosses are beautiful this year and many are found in fruit. I secured a nice lot of one neat little species growing around the base of an old tree stump. I now continued along the stream. At the base of quite a number of trees standing along the stream I found very large patches of what I think will prove to be Pleurozium.

In that part of the swamp close to the road, I found two Pitcher Plants. In the fields, I found Draba verna in full bloom. (v. Feb. 25). While going along the shore I found

seeds of Peltandra undulata beginning to germinate.

At the spring, I found the stream filled with Marchantia and a moss-like water plant. Here, too, I found seedlings of Impatiens fulva.

I & now went to the Skunk Cabbage region on the west side of Annapolis Rd. On the way passed a few willows beginning to bud. Observed how the branches (young ones) break so readily from the main stem. The tissue at this point are no doubt quite different from those at other points along the branches themselves, and also along the main stem. The young branches snap off very easily, however, those that remain on the stem no longer possess this property after the first year.

While collecting the Skunk Cabbage found two specimens with an internal spathe.

On my way home, examined several branches of Rhus venusta. They are of the  $\frac{2}{5}$  plan in phyllotaxy.

Mar. 14<sup>th</sup> Observed to-day the leaf-arrangement of the hickory. At first all observed were on the  $\frac{1}{3}$  plan, but later found a great many of the  $\frac{2}{5}$  plan. Found too a shoot which had a pseudo-terminal bud. From these observations, it will be seen that the phyllotaxy varies and I soon learned that when the shoot had a rapid growth the leaves <sup>would be</sup> ~~had been~~ arranged on the  $\frac{2}{5}$  plan, and if a slow growth on the  $\frac{1}{3}$  plan. Also if the shoot had an extraordinarily rapid & continuous growth the apex of the shoot <sup>would</sup> ~~did~~ not ripen sufficiently and so was winter-killed.

In the swamp found again a fine specimen of Skunk Cabbage with two spathes. Secured, too, several liverworts.

#### Plants in bloom

Draba verna (5)

Symphlocarpus foetidus.

Stellaria media

18. My trip to-day was for liverworts. This limestone locality being particularly rich in them. On the rocks just before reaching the dam I found Pezisia commutata Nees. I remember seeing it last year, but then mistook it for Marchantia polymorpha. The best place

for liverworts, however, is without doubt at the water-tough.  
To-day I followed the brook up to the spring and found liverworts everywhere. Plagiochila asplenoides Dumont was very common, and also Scapania nemorosa Dumont but besides these I found also Kautia Trichomanes and Frullania dilatata Nees.

Ice and snow on the hill side made the trip somewhat hazardous. Found two usual places along the road still covered with ice. From Glen Ellen, I took the direct route to the lake, as I thought that the route through Hampton might be muddy. As I crossed the stream below Glen Ellen, I frightened a musk-rat. It splashed into the water but soon appeared upon the surface, when seeing me, it again dived below. As I passed the fields, I heard the meadow lark, also the frog. Saw and heard, too, a red winged black bird. Just beyond the toll gate I came to the large patch of Equisetum hiemale and found it containing many fertile stalks. They seem to be larger (the spore cases) than those on the Green Sp. Av. I have marked one specimen between the little cedar and the Sycamore for future observation. Several Morning Cloak Butterflies were observed. Found the silver maple in bloom.

#### Plants in bloom.

Acer dasycarpum. (6)

- 21 Before going to Brooklyn, I went to the rear of Riverside Park. At first I intended examining the former Turkey farm region but observing the mud I decided to try again in the future. In going from the new electric plant to Ferry Bar I passed a marshy place. Here I found Lemna already covering the surface of the water. This plant apparently behaves as follows:—  
Late in the fall when all vegetation ceases, the living part of the plant condenses into a single elliptical leaf. This leaf then sinks to the bottom of the pond. These little elliptical bodies are now seen covering the bottom of the pond and have become quite brown in color. Now from one of the narrow ends of the ellipse a little swelling is to be seen

This little swelling in others is seen to have become larger and a little green bud-like projection has appeared. In others this has become larger and finally a full-sized bright green leaf is observed with a single white root extending from its lower <sup>under-</sup>side, and a number generally one or two smaller leaves making the entire plant body rather lobed. As soon as the plant is thus provided it rises to the surface of the water. From my observations to-day, I think the <sup>new</sup> leaf must become full-sized and the little root must have appeared before this does take place.

Observed to-day in the little ravine the large claws of raw fish I did not know that they were to be found here. In one spot 4 claws were found and at another two. Close to the spot where the four claws were found I saw on an old tree stump the mutilated body of one of the animals. It apparently had just been thus treated. Could it have been done by a bird?

Plants in bloom

*Acer dasycarpum*

*Symphlocarpus foetidus*.

*Stellaria media*

Mar. 25 Visited the little ravine in Brooklyn to-day, for underground stems of Podophyllum peltatum. These were already fairly well above ground last Tuesday, to-day they were observed much better. Was surprised to find the plant growing in a comparatively wet situation, where water was flowing continually. Here there was a hard gravelly substratum, all loose soil had been washed away and the rhizomes of the Podophyllum were right on the surface. Here, too, I found several cornea of Ariceema triphyllum just sprouting. Sensed some Spizogrye at the same spot where I got some Tuesday. The latter was conjugating beautifully yesterday after being indoors but 3 days. Found some Pellia almost ready to send up its capsule. Frog eggs were found near the river end of the ravine. Skink Cabbage in some places is well up out of the ground. From the ravine I proceeded to the Arbutus place. Many plants were found with buds showing color. Alder was found almost everywhere, with catkins quite loose.

\* On my way to the road, following the little brook, I observed in the water a little light yellowish green alga attached to submerged grass stems etc. I think it is *Batrachium*.

and almost shedding pollen and finally I came to come in full bloom. Visited the spots where I had transplanted the *Schizanthus* but there were no longer any traces of the plant in either place.\*

In the afternoon I visited the ravine. Here the alder was nowhere in bloom. The Hazel, however, was and so also the Hepaticas. The little pond near the brook is now filled with frogs' eggs and salamander eggs. Here too, I found greenish gelatinous masses on submerged leaves and stems.

#### Plants in bloom

*Acer dasycarpum*

*Alnus serrulata* (7)

*Draba verna*

*Corylus Americana* (9)

*Hepatica triloba* (8)

*Stellaria media*

*Symphoricarpos foetidus*

The cap-wood of a cut-down oak was observed and was found to be from 12 to 14 years old.

28 Trip to Elm Burnie, Swan Creek etc.

Observed the effects of the cold, this winter, upon *Cassandra calyculata*. This little shrub is an evergreen but it seems to have lost most of its leaves this winter. Noticed that in those specimens that had lost their leaves the flower-buds were very backward. In those specimens that remained green the buds were well-developed.

Musphar is coming up everywhere.

From the pond I went to Furnace Br., here I found Orontium in bloom.

From Furnace Br. I proceeded to Marley Br.

After examining the plants I sought the place here for *Arbutus*. I proceeded to Swan Creek.

While going along the banks overlooking the creek I found *Arbutus* in bloom. The alder is in full bloom and showers of pollen were shaken out when the plants were disturbed. The Red Maple *A. rubrum* was found in flower, so also Shepherd's Purse.

Batrachospermum was found in Saw Mill Pond, also a greenish alga with quite long narrow cells with a single chromatophore in each cell. On Helmer's I found Vanckeria. While crossing one of the little ravines opening into Swan Creek the bottom of which was quite swampy, I found two pretty liverworts literally covering a decaying log.

Plants in bloom

<u>Acer dasycarpum</u>	<u>Draba verna</u>
<u>Acer rubrum</u> (11)	<u>Epigaea repens</u> (13)
<u>Alnus serrulata</u>	<u>Orontium aquaticum</u> (10)
<u>Caprilla Boreo-pactaria</u> (12)	<u>Stellaria media</u>
<u>Symphlocarpon foetidum</u>	

Mar. 30 Plants in bloom

Populus monilifera (14)

31 Acer aceroides (15)

April 1 On my way from Earleigh Heights to the Severn I overtook Mr. Revell. Mr. R. is a railroader, he has bought the little piece of land between Stones and Streets. I am afraid Mr. R. has made a mistake. To-day he had come down, to await a wagon-load of furniture. I was glad to have Mr. R.'s company; When quite close to his place, we met Mr. Cheney. He told us that Mrs. Dorey's place had been sold for \$1500 house, furniture, stock and land. Mr. Kline has bought it. As I was going to Barton's and Mr. C. likewise, we went together. Mr. C. showed me a nice path along the river. We went together as far as the spring on the hillside. I then decided to return and stop at the boiling spring. Right at Bear R. I collected a nice lot of pinnillate catkins of the willow. I then proceeded along the right bank of the creek. A number of little springy places were passed filled with algae. On a little hillside I found Bazzania triloba in profusion also two other liverworts. Arrived at the boiling spring, I proceeded onward to the other spring. On this path found Sanguinaria and Hazel in bloom. Several biches are found here on the shore, one having been

been blown down and filled with catkins, I decided to cut off a few. As I cut the twigs off I observed the strong flow of sap. Drops of the liquid fell so rapidly that it sounded like rain. I tasted some of it and find it slightly sweet. I crossed Bear R. at the crossing. Looked carefully for the Diorenia but there is no trace of it anywhere. The Cypress is in full bloom. I now followed the path past Bent Oak and then along the new route to Street's, and then proceeded to the Schmiedtzia place. I was pleased to learn that the region, where this little plant grows, it is much larger than I had first supposed. The plant is just beginning to bloom, a few spikes only being found fully open. It does not look very flourishing and some spikes seem to have suffered from the frost. I dug up one of the patches carefully and observed that from the thickened end of the stem one or two fleshy roots extend and that connecting them, permeating the soil everywhere, was a close net-work of mycelium. Proceeded now to Round Bay. Just beyond Brennan's observed a tall shrub close to a telegraph pole, the one nearest the two large chestnut trees, with leaves in verticils of  $3\frac{1}{2}$ , one bearing a large leaf-ear and the others smaller ones. Did not recognize the plant. As I passed a large cycamore I took off one of the <sup>fruits</sup> ~~fruits~~ and counted the number of seeds; there were 991. Near Boone's, I collected staminate and pistillate flowering branches of Juniperus Virginiana. At Round Bay, I found Salix in bloom, staminate. It smells very sweet, honey-like. It was close to the railroad embankment and only a short distance north of the path to the swamp. Between the willows and the path I found a large patch of Lycopodium. At the swamp, I found Carandea in bloom; it was just beginning to bloom, only one or two flowers being found fully open. At the large swamp. I observed that the cranberry

is evergreen; some fruit was still to be found.

On my return from the large swamp. I found a Cypress tree with pitillate flowers.

Plants in bloom.

<i>Acer dasycarpum</i>	<i>Epigaea repens</i>
<i>Acer rubrum</i>	<i>Juniperus Virginiana</i> (21)
<i>Alnus serrulata</i>	<i>Salix</i> (16)
<i>Capella Burs-pactoris</i>	<i>Sanguinaria Canadensis</i> (17)
<i>Ceanothus scaberrimus</i> (20)	<i>Populus monilifera</i>
<i>Chaenactis sphaeroides</i> Spach. (19)	<i>Stellaria media</i>
<i>Draba verna</i>	<i>Schizanthus odora</i> (18)
<i>Corylus americana</i>	<i>Symphlocarpus foetidus</i>
<i>Carex</i> (22)	

- April 3 Populus alba is in full bloom. Received to-day several nice specimens of pitillate flowers of this tree. Observed that the flowers are all borne on last year's wood, upon the well matured portion of that year's growth. Each branchlet, therefore, has from 5 to 7 pitillate catkins. When these fall off, later in the season when ripe, they leave a pretty scar, these can be observed dating back several years. The apex of (the stem) each branchlet, the latest growth has one or two leaf buds. The one at the terminus (pseudo-terminal) contains the prolongation of the stem.

Plants in bloom

- Populus alba* (23)
- 4 A trip through the ravine, I went in the direction of the pump-house and to the dam. Here I found Erythronium <sup>v. 153</sup> in bloom. This is one of the best places to get this pretty spring flower. Two plants were found in which the bulbs were very close to the surface. One of these had already begun to send out a long stem from below the bulb.
- Hepaticas are in full bloom. All three colors, white, pink and deep blue. That there are three different colored varieties can be readily observed; the color of the flowers of any particular plant being the same. One observes that there are some plants of intermediate colors, those the colors verge

from deep blue gradually into pink, and from pink into white. I tried to find out if there were any other distinctive features, but think all of my observations were ~~on~~ here of negative value. At one time I thought that it was only the white variety that smelled sweet, but presently I found pink ones and finally also blue ones that smelled equally sweet, and learned that it was only after the flowers had opened to a certain extent that it really smelled sweet at all, it having no odor when it first opens, nor later when fully open. I thought too, at one time that the white blossoms were largest, but later observed that there were also small ones and that the blossoms grew in size as they matured and that it was only the mature ones that smelled sweet. And then I thought that the white flowered plants had the larger leaves but found later also large leaves on the other varieties. At Owl Spring I visited my H. acutiloba and was pleased to find it in flower. It had 7 petals. Here, I found some Erythronium already done blooming, and here also some Syrphocarpus foetidus still in bloom.

At Camp Cozy, I secured some nice Puff-balls. They were growing on a decaying log. The Chrysosplenium here was not yet in bloom.

Sanguinaria Canadensis is found in bloom everywhere.

Alnus serrulata & Corylus Americana are both done blooming. I found both Elmus in bloom - Ulmus fulva & U. Americana. A Danaus Archippe and also several little blue butterflies with black spots on wings were observed to-day.

#### Plants in bloom

Anemone thalictroides (24)

Claytonia Virginica (28)

Draba verna

Dicentra palustris (25)

Equisetum arvense (37)

Dentaria heterophylla (30)

Erythronium Americanum (27)

Hepatica acuta (31)

Hepatica triloba

Lindera Benzoin (26)

Luzula vernalis (29)

<i>Oreocentrum aquaticum</i>	<i>Ulmus americana</i> (35)
<i>Poa brevifolia</i> (32)	<i>Ulmus fulva</i> (36)
<i>Ranunculus fascicularis</i> (38)	<i>Viola pinnatifida</i> (33)
<i>Symplocarpus foetidus</i>	<i>Saxifraga Virginiana</i> (34)
<i>Taraxacum officinale</i>	<i>Tumulus farfara</i> (M.B.) (39)
<i>Chrysosplenium Americanum</i> (M.B.) (40)	

*Tumulus farfara* & *Chrysosplenium Americanum* were brought into Field Club meeting.

Observed all along the brook beautiful algae.

April 8 Along the Patuxent from Union Dam to Holfordville to Alherton and then back to Ellicott City. I got to Union Dam by way of the Rolling Road. On this road, I observed a number of trees in bloom, which I failed to recognize. They looked somewhat like *Populus*. I will examine them again later when in leaf. *Arbor Vitae* is now in flower, also *Cunninghamia*. On the rocks at Union Dam, I found *Aquilegia* almost in flower, the buds were showing color. I examined the *Floukeia* most carefully, but it was not in flower; I find it attacked by some rust (?); numerous yellow spots mark its ravages. Arrived at Cedar Bar. I proceeded to the *Chilanthus* place; at the junction with its main tributary I found a number of pretty fungi on a fallen log. I think them *Polypori*. Up the little stream farther, I found a number of old *Puff-balls* on a fallen oak. I now returned to the river and proceeded to Holfordville. Near a rocky ledge I found several interesting *Dentaria*. They were quite leafy. Leaves alternate from 3 to 5 on the stem. They were growing with *D. heterophylla* but differed from them in having the leaves as described above, and having their leaves almost exactly like the single root-leaf. The root-leaf was like the root-leaf of the *heterophylla*. Can this be *D. maxima*! At H., I crossed the river and proceeded towards Alherton. I stopped to examine to *Caltha palustris* and was pleased to find it in bloom. Here *Symplocarpus* is at its prime. In one or two places along the river I observed 4 plants

which I think may prove to be Montanae.

Plants in bloom

<i>Anemone thalictroides</i>	<i>Hepatica triloba</i>
<i>Acer rubrum</i>	<i>Houstonia coccinea</i> (41)
<i>Claytonia Virginica</i>	<i>Lindera Benzoin</i>
<i>Baltha palustris</i> (46)	<i>Luzula campestris</i> (48)
<i>Chrysosplenium Americanum</i>	<i>Nepeta telekiana</i> (42)
<i>Dica palustris</i>	<i>Oreoclinium agrosticum</i>
<i>Dentaria heterophylla</i>	<i>Poa brevifolia</i>
" <i>laciniata</i> (45)	<i>Ranunculus abortivus</i> (47)
" <i>maxima</i> (43)	<i>Saxifraga Virginiana</i>
<i>Epigaea repens</i> , <i>Equisetum arvense</i>	<i>Symphlocarpus foetidus</i>
<i>Erythronium Americanum</i>	<i>Taraxacum officinale</i>
<i>Carex Pennsylvanica</i> (44)	<i>Viola cucullata</i>

I note that Britton states that *Dentaria laciniata* blooms earlier than *D. heterophylla*. I think here it is the reverse.

I observed that *Equisetum arvense* begin to discharge its spores from apex first and then gradually downward.

- 11 Just beyond Arbutus I observed several peculiar-looking plants. They had beautiful pinnately incised leaves and from their odor I thought it a Crucifer. However, I failed to recognize it so I called to a farmer close by and asked him about it but he didn't know it. He thought it might be some kind of weed. I asked him if he thought it might be horse-radish. "Oh! no", he knew it was not that. Right in the ditch I saw more of the plants, one much more developed than the others. This one I decided to take along with me. In digging it out, I observed a horse-radish like odor, and smelling the root I recognized it as horse-radish. I soon understood why they failed to recognize the plant; it was because the leaves now are quite different from those appearing later. Those on the plant as it first comes out of the ground are pinnately cut into linear divisions, those which appear later are elliptical. Nothing of particular interest was observed until I was in the little ravine at Glen Arbutus.

April 11  
(continued)

This little spot was at its best; flowers everywhere: -  
 Spring Beauties, <sup>Hepaticas</sup> Bloodroot, Dentaria, Erythronium, Dices, Spice  
 Willows, Wild Ginger, Saxifrage. I went up the stream as  
 far as the large rock and here I made a nice little find  
Metzgeria conjugata. Leaving the ravine, I proceeded to Avalon  
 and crossed the river. I went at once to the Dientea place  
 and was greatly pleased to find it in full bloom. Here too  
 was Mitella just beginning to bloom. So surprised was I to  
 find these two plants already in bloom that I decided to  
 go up the river a short distance to see if Mertensia was a  
 flower. As I was then in the Kentia place I examined the  
 ground carefully for this interesting plant and sure enough I  
 found one. I marked the plant by plunging a little stick into  
 the soil close by, so as to note if I am not right when later  
 the plant comes to bloom. I also visited my Trilliums and  
 found three of them up - two in bud. After observing the  
Mertensia which was in flower, just beginning, I proceeded to  
 the B. & O. R. R. bridge and then to along the little stream  
 close by. Here I found a pretty patch of Anemone nemorosa in  
 full bloom. Earlier in the day, I found a patch of it also  
 in the ravine at Glen Artery. In this rich alluvial soil I  
 was pleased to find several fine specimens of Gymnomitra eximius  
 one of the Arenogaster. Here too, I found several fairly good  
 specimens of the sterile shoots of Equisetum arvense. They, how-  
 ever were quite small compared with the specimens found later  
 along the B. & O. R. R. growing in the cinders. It seems strange  
 that in the spots where the fertile spikes are to be found there  
 are now very few (some places none) of the sterile shoots, and  
 here where the sterile shoots are to be observed there are no  
 fertile spikes. I have observed this several times.  
 Upon reaching the B. & O. R. R. I started for home. Just as  
 I entered Landedown, it began to rain. It ceased, however,  
 before I arrived home.

While going from Cannon Rd to the ravine at Glen Artery, I found  
 a nice patch of Vivula tenella. Later found another near Avalon.

<u>Plants in bloom</u>	
<i>Anemone nemorosa</i> (58)	<i>Hepatica triloba</i>
<i>Amelanchier Canadensis</i> (62)	<i>Laminium amphiscandale</i> (50)
<i>Arabis trifolia</i> (57)	<i>Luzula campestris</i>
<i>Anemone thalictrifolia</i>	<i>Lindera Benzoin</i>
<i>Antennaria plantaginifolia</i> (53)	<i>Mertensia Virginica</i> (64)
<i>Barbarea praecox</i> (51)	<i>Mitella diphylla</i> (61)
* <i>Acerum Canadensis</i> (56)	<i>Medicago lupulina</i> (52)
<i>Corydalis flavula</i> (59)	<i>Poa brevifolia</i>
<i>Carex Pennsylvanica</i>	<i>Ranunculus abortivus</i>
<i>Claytonia Virginica</i>	" <i>foeniculalis</i>
<i>Capsella Bursa pastoris</i>	<i>Stellaria pubera</i> (65)
<i>Draba verna</i>	<i>Symphlocarpus foetidus</i>
<i>Duca palustris</i>	<i>Saxifraga Virginiana</i>
<i>Dentaria heterophylla</i>	<i>Sanguinaria Canadensis</i>
<i>Dentaria laciniata</i>	<i>Stellaria media</i>
<i>Dicentra Cucularia</i> (60)	<i>Sisymbrium Thabum</i> (49)
<i>Erythraea repens</i>	<i>Parasacum officinale</i>
<i>Erythronium Americanum</i>	<i>Viola tenella</i> (55)
<i>Fragaria Virginica</i> (66)	<i>Viola scaberrima</i> (63)
	<i>Viola cucullata</i>
	<i>Viola pedata</i> (54)

April 13 To the Blue-bell hill found the hill blue with the many bluebells. Then descended to the swamp where we found several patches of Anemone nemorosa.

<u>Plants in bloom</u>	
<i>Anemone nemorosa</i>	<i>Mimulus botryoides</i> (67)
<i>Anemone thalictrifolia</i>	<i>Sanguinaria Canadensis</i>

- 14 Along Guyana Falls. In the little ravine not far from the Edmondson Av. bridge, I observed several large patches of sterile Equisetum arvense no fertile spikes to be found. Learned to-day from Mr. Allen why the Judas tree was so called; the Judas-tree with its gorgeous coloring attracts the bees, only to deceive them for it has no honey to offer them. This explanation of the origin of the name seems very plausible; I shall investigate and see if it is true.

The buds of the Mulberry are quite large, it will soon be in bloom.

April 15 I was pleased to find two pithillate trees of Populus alba on the road to Poughkeeps, at the entrance of an estate. Judas tree still not in flower.

Afternoon: found a great many seedlings of Ambrosia trifida these seedlings retain the seed-coat for some time upon one of the cotyledons.

### Plants in bloom

Lithospermum arvense (69)

Vicia minor (68)

16 In the little ravine beyond Brooklyn I found a small specimen of Gyromitra. Anemone nemorosa is in full bloom.

I certainly must visit this spot later in the season. A number of plants attracted my attention but which I was not able to place, one I am almost sure is Poterium Canadense.

I was pleased to find Gerardia flava\* just coming up, its foliage dark maroon and reminding me very much of some Amaranthus.

### Plants in bloom

Sarcocornus officinalis (71)

Veronica arvensis (70)

Anemone nemorosa

18. While on my way out to Catonsville, I observed in two places pithillate trees of Populus alba, one near the hair factory and the other at Irvington.

While on our way to the ravine, just beyond Valhalla, we observed a number of seedlings - apparently leguminous plants. I looked carefully at a number of Cornus trees but ~~find~~ found none in bloom.

While going down the hillside to the spring, I found in several places Gyromitra no doubt the same species found near Patepsco, G. brunnea, as far as could be observed superficially; here, however, was no alluvial soil only pure leaf mold. The carex along the brook is in full bloom.

Solea concolor is well up out of the ground. This plant seems to be spreading more and more.

Seedlings of Polygonum Convolvulus (?) were found.

The cold weather this past week has brought things to a standstill so there is practically no change in their appearance. Montenica is only a little more open, but still not in full bloom.

I examined the plants of Filiberia but none were found in bloom, but are well developed.

I stopped to see my specimens of Trillium grandiflorum the bud of one is already showing color. One of the plants just as happened last year, has had its leaves partially eaten.

On Cannon Rd, I secured specimens of Quercus in bloom also specimens of Cherry.

While going along Sulphur Spring Rd, I found two pistillate trees of Populus. They were on the right side of road immediately in front of the hotel.

#### Plants in bloom

<u>Anemone</u> <u>thalictroides</u> x ✓ +	<u>Luzula</u> <sup>confertifolia</sup> <u>resumens</u> x
<u>Anemone</u> <u>plataginifolia</u> x ✓	<u>Luzula</u> <u>vernalis</u> x ✓
<u>Anemone</u> <u>nemorosa</u> x ✓	" <u>confertifolia</u> x
<u>Acer</u> <u>Canadense</u> x ✓	<u>Lamium</u> <u>amplexicaule</u>
<u>Arabis</u> <u>lyrata</u> (74) ✓	<u>Lindera</u> <u>Benzoni</u> .. ✓
<u>Aquilegia</u> <u>Canadensis</u> (75) ✓	<u>Mitella</u> <u>diphylla</u> .. ✓
<u>Arabis</u> <u>trifolia</u> .. ✓	<u>Montenica</u> <u>Virginica</u> .. ✓
<u>Barbarea</u> <u>vulgaris</u> x ✓ +	<u>Nepeta</u> <u>clethra</u> .. ✓ +
<u>Chrysantha</u> <u>Virginica</u> x ✓ +	<u>Orontium</u> <u>aquilegifolium</u> x
<u>Chrysopsis</u> <u>virginica</u> <u>Americana</u> x	<u>Poa</u> <u>brevifolia</u> x ✓
<u>Corydalis</u> <u>flavula</u> .. ✓	<u>Ranunculus</u> <u>abortivus</u> .. ✓ +
<u>Cephaelis</u> <u>Bennettii</u> x ✓ +	" <u>fascicularis</u> x +
<u>Dicentra</u> <u>baccharia</u> ✓	<u>Stellaria</u> <u>media</u> x ✓ +
<u>Dryas</u> <u>palustris</u> x ✓	" <u>pubera</u> x ✓ +
<u>Dianthus</u> <u>heterophyllus</u> x ✓	<u>Saxifraga</u> <u>Virginica</u> x ✓
" <u>lanceolata</u> x ✓	<u>Sanguinaria</u> <u>Canadensis</u> x ✓
<u>Erythronium</u> <u>Americanum</u> x ✓	<u>Taraxacum</u> <u>officinale</u> x ✓ +
<u>Houstonia</u> <u>curvata</u> x ✓	<u>Vicia</u> <u>minor</u> x ✓
<u>Hepatica</u> <u>obtusifolia</u> x ✓	<u>Viola</u> <u>ovata</u> (72) x

\* On way home found *Equisetum hyemale* in bloom

\*† Those marked \* found also May 13

*Viola cucullata* x ✓ +

*Viola palmata* x

*Viola pedata* x ✓

" *scaberrima* ✓

*Viola bicolor* (73) x ✓

" *pinulifolia* (76)

April 20 After leaving Glen Ellen and while on our way to the 3-arched bridge I found a little stream, just before coming to the spring, filled with *Vantheria*. *Asterella hemisphaerica* was found in numerous places and in great quantity. Our little trip beyond the Bumpander was fine. Inadvertently I passed the road and continued up along the run. We found the little stream beautiful beyond description. I even observed that I was going wrong, and after consulting the map decided to go up stream a little farther and then cross over, following a little stream. This proved a most excellent decision, for here we found *Caltha palustris* a fine little find, in profusion. We found little trouble getting to the road and then we proceeded at once to *Mertensia* spots. This was still quite backward, only one plant being found fully open. The *Dicentra* and the *Dentaria* were out fully and were at their best.\*

Plants in bloom. \*\*

*Epigaea repens*

*Amelanchier Canadensis*

*Fraxinus Americana* (78)

*Anemone thalictroides* ✓

*Fragaria vesca* (81) ✓

*Acer Negundo*

*Houstonia carnea* ✓

*Antennaria plantaginifolia*

*Hepatica obtusiloba*

*Acerum Canadense*

*Luzula campestris*

*Aquilegia Canadensis* ✓

*Chimaphila Borealis*

*Anemone nemorosa*

*Mitella diphylla* ✓

*Barbarea praecox* (77) ✓

*Mertensia Virginica* ✓

" *vulgaris* ✓

*Ranunculus abortivus* ✓

*Scilla maritima* *Americana*

" *farinularis*

*Capella Burr-pastoris* ✓

*Stellaria pubera* ✓

*Claytonia Virginica* ✓

*Saxifraga Virginiana*

*Caltha palustris*

*Stellaria media* ✓

*Cardamine hirsuta* (80) ✓

*Sanguinaria Canadensis*

*Draba verna*

*Taraxacum officinale* ✓

*Dicentra Cucullaria*

*Viola cucullata* ✓

*Dentaria laciniata*

" *canina* (79) ✓

*Erythronium Americanum*

*Vicia minor* ✓

21 Trip through the ravine.

Plants in bloom v. p. 159 x

*Carex Canadensis* (93) ✓

*Cardamine rhomboides* (89)

*Cerastium vulgatum* (84) +

*Hypoxis erecta* (85) +

*Oxalis acutifolia* (88)

*Veronica peregrina* (82)

*Arisaema triphyllum* (87) ✓ +

*Obolaria Virginica* (91) +

*Pedicularis Canadensis* (92)

*Silene Pennsylvanica* (86)

*Thalictrum divicorne* (90) ✓

*Viola palmata* (83) +

In Valiant's garden are a few plants of *Berberis vulgaris*. We stopped to examine the plants which are now in flower. I showed them how the stamens, when lightly touched, spring against the stigma.

The *Carex*, along the brook is in full bloom. I shall try to get specimens in fruit and determine it.

*Carex Pennsylvanica* is now in fruit.

22 A short trip along the B & O. R. R. tracks to Locust Point found *Potentilla Canadensis* in bloom and in Riverside Park, I found *Platanus occidentalis* in bloom.

Plants in bloom

*Potentilla Canadensis* (95)

*Platanus occidentalis* (96)

Last Monday I saw specimens of *Liquidambar* in bud.

24 On our way down Thistle Glen Rd I was pleased to observe in ground to our right several large patches of *Anemone nemorosa*. The chime (*Ulmus fulva*) are now in full fruit. Found to-day a four-rayed flower of *Asarum Canadense*. One of the moist finds was a nice colony of liverworts in fruit, one was *Pellia epiphylla* easily recognized by its light brown capsules, among it was another with dark maroon capsules, I think it *Odontochisma*.

I stopped to look at my *Trillium grandiflorum* and found one in full bloom.

Plants in bloom. v. p. 159 x p. 161 ✓

*Carpinus Caroliniana* (97)

*Chelidonium majus* (98)

*Betula nigra*

*Caulophyllum thalictroides* (103)

*Cornus florida* (104)

*Fragaria Indica* (99)

*Floerbia purpurascens* (102)

*Mertensia Virginica*

*Osmorhiza brevistylis* (100)

*Floerbia* is now in bloom. Buds on *belthi* are beginning to open and flower buds are showing. *Houttonia caerulea* in full bloom.

Saw to-day a *Papilio Purpurea*.

*Poa annua*

*Trillium grandiflorum* (105)

*Viola blanda* (101)

*Viola tricolor* var.

On March 18, I brought home a fertile spike of *Equisetum hiemale* which had not yet opened. I placed it in water, hoping to have it discharge its spores in a few days. No spores have as yet been discharged, but I observe that the cutting has sent out a nice green shoot and into the water many roots.

April 27

A short trip along Gwynn's Falls. The *Judas tree* is now in full bloom. Both *Elms* are in full fruit. The fruit of *Ulmus fulva* is much larger, the samaras having a diameter almost twice that of those of *U. Americana*. The latter are beautifully fringed-ciliate and are borne on quite long pedicels, whereas in *U. fulva* the fruit is nearly sessile and not fringed ciliate. The fruit of *U. Americana* is reddish whereas that of *fulva* is green. The notch at base of fruit of *U. Americana* is very perceptible in *fulva* it hardly to be seen.

*Arimma triloba* has quite large buds but plant is not yet in bloom.

*Xanthoxylum Americanum* was found in full bloom, I believe this plant protogynous, for the fruit of the fertile plants have fully developed ovaries whilst the staminate plants are still in bloom.

The *Bladder Nut* is just beginning to bloom, so also *Senecio aureus*.

Plants in bloom

*Oxalis stricta* (107)

*Senecio aureus* (108)

*Xanthoxylum Americanum* (109)

*Staphylea triloba* (110)

28 This Shirley Lane trip is always a favorite one. To-day a number of new plants were observed. All were interested in seeing a *Beech* in full bloom. We noted some differences between fruits of *Acer rubrum* and *A. dasycarpum*. The fruits of the latter are much larger and green whilst those of *A. rubrum* are quite small and red. We also noted that *Prunus Virginiana* comes to flower much earlier than *P. serotina*; the leaves of the latter

are somewhat smaller, much thicker and shining above; those of *P. Virginiana* are beautifully serrated, the serrations ending in fine teeth whereas those of *serotina* are blunt.

I was surprised to find the yellow violet on this trip. I have been over the route frequently but failed to find it on my former trips. *Equisetum hyemale* has shed its spores. <sup>v. p. 173</sup> I brought home a few cones for cutting experiments. I believe the fruits of *A. rubrum* & *A. dasycarpum* are nearly ripe, they are beginning to fall from trees. Plants in bloom.

*Fagus ferruginea* (113)

*Lepidium campetris* (111)

*Plantago lanceolata* (112)

*Polemonium reptans* (116)

*Prunus Virginiana* (114)

*Vaccinium corymbosum* (115)

29. Just as I arrived at Elvaton, it began to rain, but I had an umbrella so did not care. I proceeded towards the Magalloway. When near Waterford, I turned off to the pond. I was pleased to see the large area of *Oxycoccus aquaticus* in full bloom. Here too, I observed that *Dracopis* was already well advanced. I walked along the bank of the pond. <sup>found</sup> The greater portion of this trip is very pleasant, <sup>near the end</sup> only a small portion close to the road has been cleared, yet even here green beautiful plants of *Viola pedata*. From W. I proceeded to the Box Huckleberry locality. The <sup>soil</sup> road here is very sandy. <sup>new timber</sup> A new growth of *Pinus* is springing up everywhere. The path goes along the edge of the declivity and through this new growth of *Pinus*. Here and there are still large cleared areas. These little spots are interesting collecting grounds especially so for lower forms of plant life. To-day was an ideal day for collecting *hercynia*. In some of these areas I could collect them by dozens. I found the Huckleberry locality without any trouble. As soon as I entered the little ravine I knew I was close to the spot. The moist weather these past few days has made this spot a botanical paradise. The ground <sup>was</sup> covered everywhere with beautiful green moss and a little stream meandered through

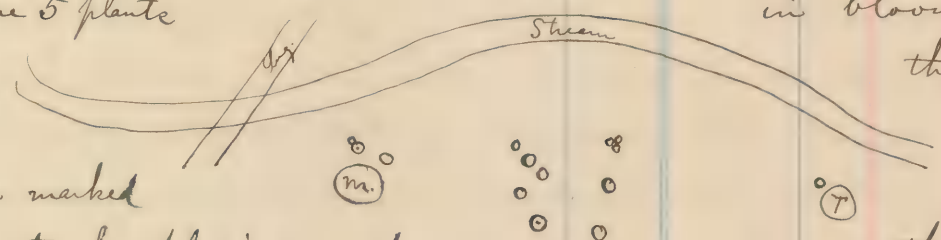
April 29  
(continued)

it. On the hillside, a short distance away was a spring. One of the first things that I observed as I entered the little ravine was a decaying holly stump thickly overgrown with Liverworts. I collected all of it then sat down on a near-by fallen tree to eat my lunch. After dinner, I proceeded to the Box Huckleberry apt. It was in bloom so I collected a few specimens for my press. <sup>On the way</sup> Here in the moist soil I found a large patch of Medeola Virginia, and best of all, a fine specimen of Cypripedium acaule. <sup>in full bloom</sup> This is the earliest I have ever recorded finding it in flower. I now crossed the stream and returned to Waterford. On the way back stopping at Josiah Copher's old homestead. At W. I was surprised to find two large White Pines.

I now hastened onward to Elberton and then to Forest Home. Getting on the wrong road I found myself on the way to Benfield but soon learned my mistake and took a path leading in the right direction. On this path I found innumerable plants of Arum nudicaule, not in flower however. On the Benfield path were found many V. pedata and Lupinus perennis. This I was told is called "crowfoot" by the natives. I soon reached Forest Home and the old dam.

I now started directly across the country for the large Pitcher Plant; this year it will have 7 flowers. I then went to the Helonias apt. To-day I did not find quite as many plants in bloom as last year, I suppose only about  $\frac{1}{2}$  as many for I counted only about 150. I visited my marked locality and noted the following (vide p. 80.) Whereas last year there were 5 plants

year but I further marked two plants by placing around



there were two. these them, that

is around each one a piece of copper wire. It was now getting time to get to the train so started for Marley.

The day had turned out quite an ideal one. The rain lasted about a hour and a half. During the afternoon, the sun shone.

Plants in bloom.

*Anemone nemorosa*  
*Azalea undiflora* (129)  
*Amelanchier Canadensis*  
 " " var *oblongifolia* (126)  
*Antennaria plantaginifolia*  
*Barbarea praecox*  
*Cerastium vulgatum*  
*Capsella Bursa-pastoris*  
*Cypripedium acule* (122)  
*Carrandrea corymbata*  
*Cornus florida*  
*Eryngium yuccifolium*  
*Euphorbia yuccifolia* (117)  
*Fragaria vesca* (118)  
*Sagittaria arifolia* (123)  
*Helonias bullata* (130)  
*Houstonia coccinea*  
*Krigia Virginica* (125)  
*Lamium amplexicaule*  
*Lupinus perennis* (127)

*Lithospermum annua*  
*Myrica asplenifolia* (128)  
*Orontium aquaticum*  
*Okenia coccinea*  
*Poa annua*  
*Plantago Virginica* (124)  
*Pyrus arbutifolia* (119)  
*Potentilla Canadensis*  
*Rumex acetosella* (120)  
*Silene Pennsylvanica*  
*Sassafras officinale*  
*Sisymbrium Thapsus*  
*Stellaria media*  
*Taraxacum officinale*  
*Veronica*  
*Vaccinium corymbosum*  
*Vaccinium vacillans* (121)  
*Viola Atlanticus* (131)  
*Viola pedata*  
*Viola pinnatifolia*  
*Viola cucullata*

On my way from Waterford to Elvaston I found another locality for a pictillate Poplar. In front of the negro shanty, on left side of the road.

697.  
 May 2 A trip to-day to the Caves, the ravine and home by way of Pikeville. I took this trip to-day with the hope of finding the Broom - Cytisus scoparius in bloom, but I was a little too early for it, possibly in 2 to 3 weeks it will be in bloom. The Red Maple - Acer rubrum in full fruit was observed all along the road. It is a beautiful object now with its red or reddish brown keys.

Arrived at the old church, I found Mr. Schaeffer busy with another man "cleaning up" a grave. He remembered me at once, and we had again a long chat and a tramp about the old church-yard. Lilies of the Valley have become quite a pest

May 2  
(continued)

here, they are spreading everywhere all over the graves. Mr. S. told me that he knew Nepeta bluebona called Bumble-bee weed. Last night the large mill at Orange became burned to the ground, Mr. S. said the flames could be seen distinctly from his home.

It was after eleven o'clock when I left the church. I crossed the field going almost directly to the "Cave" and to the corduroy road. Nothing particularly interesting was observed on this part of my trip. I stopped near the old kiln to eat my lunch.

The best part of my trip was of course after I got on the corduroy road. One of my first finds was the Cash Apple Pyrus coromaria, it was almost fully open. Next I came to Prunus Pennsylvanica in full bloom. This little tree looks beautiful at this time, while in full bloom. The blossoms smell rather musty, although not quite as disagreeably as those of the pear. Next came a fine heat in the shape of a large patch of Caltha palustris. Near it grew also much Veratrum viride. I proceeded to the spring where I refreshed myself with some of its cool water. I then crossed the brook and continued to my trip down on its left bank. On the rocks I found Agilizia Canadensis now in full bloom; here, too, was much Viola canina. This pretty violet was found also in the Caltha palustris region. I had brought along with me a lot of Viola and V. sent me by Mr. Round and I was on the look-out for a suitable place to plant them. Just where the stream receives its first large tributary, a short distance away from the main stream near a large maple I found a moist open place overgrown with violets. I thought it an ideal place for my plants. I planted them in several spots\*. The further help me to identify the spot I hammered a nail into the maple.

I now was on the look-out for the Trillium and for the Magnolia. I found T. cernuum just in bloom, but Magnolia Umbrella was still leafless.

A great many huge plants of Kalmia latifolia are to be found on this trip. On carefully examining its bark I found again Fraullania Arcepsana in quantity.

A nice find too was a pretty Lichen one of the foliose forms. It was growing on the bark of a maple.

In nearly all of the wet spots I could find Geoglossum. On the dry hillsides I found in several places Viola villosa, some of which I collected for my herbarium.

After leaving the ravine, I took the usual route to Stinson and then to Pikesville where I took the car for home.

#### Plants in bloom

*Antennaria plantaginifolia*  
*Anemone thalictroides*  
*Anthoxanthum odoratum* (132)  
*Arenaria serpyllifolia* (133)  
*Anemone nemorosa*  
*Aquilegia Canadensis*  
*Arisaema triphyllum*  
*Brahia trifolia*  
*Scarum Canadensis*  
*Azalea undiflorum*  
*Barbarea praecox*  
 " *vulgaris*  
*Carpinus Canadensis*  
*Chrysosplenium Americanum*  
*Cardamine rhomboides*  
*Claytonia virginica*  
*Calthea palustris*  
*Cerastium vulgatum*  
*Cercis Canadensis*  
*Cornus florida*  
*Dentaria heterophylla*  
*Erythronium Americanum*  
*Fragaria Virginica*

*Fragaria vesca*  
*Houstonia coccinea*  
*Lepidodermis campetris*  
*Lithospermum arvense*  
*Luzula campetris*  
*Lamium purpureum amplexicaule*  
*Medicago lupulina*  
*Nepeta helleborifolia*  
*Oxalis virginica*  
*Plantago Virginica*  
*Potentilla Canadensis*  
*Ranunculus abortivus*  
 " *recurvatus* (134)  
*Silene Pennsylvanica*  
*Senecio aureus*  
*Saxifraga Virginica*  
*Stellaria media*  
 " *pubera*  
*Succisa Thalictrum*  
*Saxifraga officinalis*  
*Parasacum officinale*  
*Trillium cernuum* (135)  
*Viola pedata*  
 " *villosa*  
 " *pubescens* (136)  
 " *blanda*

*Viola cucullata**Viola cucullata**Veronica pycnantha**Veronica minor*

May 4.

A short trip along Lwynn's Falls from Windsor Heights to Dickeyville with Section A. of the Botany Class. The elms are now dropping their fruits.

Plants in flower.*Ranunculus septentrionalis* (143)\**Juglans nigra* (137)*Acunina triloba* (140)" *cuneata* (138)*Salix Apocynifolia* (141)*Celtis occidentalis* (139)*Lonicera Purshii* (142)

699 5

With Section B. of the Botany Class from Bonnie Bee to Windsor Heights. This trip is always an enjoyable one. We were pleased to find a number of *Orchis spectabilis* in flower.

Plants in flower*Ranunculus bulbosus* (149)*Chrysanthemum leucanthemum* (144)*Rubus Canadensis* (147)*Poa pratensis* (145)*Urtica perfoliata* (150)*Podophyllum peltatum* (146)*Erigeron bellidifolius* (151)*Pastinaca imperialis* (148)*Ceanothus americanus* (152)*Aphyllon uniflorum* (153)*Geranium maculatum* (154)*Orchis spectabilis* (155)*Platanus occidentalis**Fagus ferruginea**Morus rubra* (156)*Broussonetia papyrifera* (157)

*Ceanothus americanus* was found along Franklin Rd on <sup>right</sup> left side of road. The beech is still in bloom.

700

6

A trip to-day from Towson to Lutherville, then to Cockeysville. The morning was cloudy and the paper stated rain, so I took an umbrella but found no need of it. It was a few minutes past nine o'clock when I reached Towson. I took my usual route to Lutherville and arrived there an hour later. The woods are now beautiful with Dogwood in full bloom. With the exception of a few *Viola pedata* and *V. bicolor*, and some willow shrubs in fruit nothing particularly noteworthy was observed. In Lutherville, though, I found a few Sugar Maples, just as I came out of the woods and later a few Norway Maples. I see no particular resemblance between the leaves of these

two species. I think the leaves of the Sugar and the Red Maple are more nearly alike, so much alike that I think I have frequently mistaken the Sugar Maple for the Red Maple. When in fruit there can be no mistaking the one for the other. The Sugar Maple will be in fruit and in full leaf at the same time; the Red Maple on the other hand will be in full fruit but not in full leaf. The samaras of the latter are red whereas those of the Sugar are green. Both occupy similar positions on the stem being the two outer of the lateral collateral buds. The keys of the Sugar Maple are more divergent than those of the Red Maple, yet, notwithstanding, having broader wings the sinus between the two keys is much smaller and acute rather than obtuse.

I kept a sharp look-out in the wet fields near the village, but noted nothing particular. I observed that Spirea lobata is coming up finely. A short distance up the road, I was surprised to find some fine plants of Caltha palustris.

I had gotten as far as the signal tower, when I was overtaken by an old man. I say old man for he was 73 yrs. of age, although he certainly looked much younger fully 10 yrs. younger, I should say. We huddled each other the time and soon entered into conversation. Mr. Wilhelmsen that ~~was~~ his name, was on his way to Texas, where he intended taking the train for his home near the Pa. border. He had walked from Mt. Washington where he was working as placter, earning \$3.50 a day. At Texas, he left him and continued onward to Cockeysville.

Arrived at C. I proceeded to the marble quarries. I stopped to examine one of them more closely, descended to the bottom fully 80 ft. below the surface to look at some of the plant life. Found nothing particularly interesting except a large Potamogeton.

After again getting to the top I proceeded to the brook.

May 6  
(continued)

and then walked along its bank to the foot bridge. This I crossed, passed the large spring near the barn, and proceeded to the road. The road, here, is quite close to the woods, and as this was my objective point, I went up the hill and into the woods. I now sat down to eat my lunch. After eating I proceeded onward up the hill when I came to a narrow foot-path. This I followed. It soon became wider, merging into a wagon path, and led past a large house on the hillside. The house is close to a ravine through which a small stream runs. After passing the house, I was obliged therefore to go down hill again, cross the stream, and again up hill. Here right on the hillside, were two fine trees a Red Maple near the house and a Black Maple higher up.

Black Maple is distinguished from Sugar Maple <sup>by</sup> having the under side of the leaves, especially the veins, very pubescent.

I spent some time looking at the maples and studying them, then proceeded up the hillside. On my way up, I came to a nice path running parallel with the distant railroad and in the direction of Texas. On this pretty path I found Pogonia verticillata in quantity. Hundreds of the plants were observed. Some of them had already opened. How delightfully sweet they smelled! The road led to a fence but continued on the other side and finally to a house on the cleared hillside. Just below the house at the base of the hill is a spring. Here a path going along the bottom of the hill attracted my attention. I followed it until I observed it leading across the fields, I then left it and again entered the woods. After going over some very rough places, I came to another little stream. I now decided to get to the railroad so proceeded along <sup>a path following</sup> the stream, where it had. I had not gone far when I observed that the <sup>path</sup> road widened into a road and followed a fence. I kept on this road and found that it turned into the road leading to Padonia, entering the road near a large oak. While on this path I found several Pyrus Coronaria in full bloom. Later while

on my way to Lutherville, I found more of these trees some just beyond P. and some near Timonium. When again on the tracks I hastened onward reaching Lutherville between 4.30 and 5 o'clock, Towson about an hour later and home about 7 P.M.

Plants in bloom

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| <i>Anemone thalictroides</i>      | <i>Lamium amplexicaule</i>          |
| <i>Anemone nemorosa</i>           | " <i>purpureum</i> (158)            |
| <i>Antennaria plantaginifolia</i> | <i>Lepidium Virginicum</i> (163)    |
| <i>Anthoxanthum odoratum</i>      | <i>Medicago lupulina</i>            |
| <i>Arisaema triphyllum</i>        | <i>Nepeta Glehoma</i>               |
| <i>Azalea nudiflorum</i>          | <i>Ornithogallum nutans</i> (159)   |
| <i>Arenaria serpyllifolia</i>     | <i>Orontium aquaticum</i>           |
| <i>Barbarea vulgaris</i>          | <i>Oxalis stricta</i>               |
| " <i>fraxinea</i> ,               | <i>Osmorhiza brevistylis</i>        |
| <i>Bratargus coccinea</i> (167)   | <i>Polygonum verticillata</i> (166) |
| <i>Crataegum nutans</i> (165)     | <i>Podophyllum peltatum</i>         |
| <i>Caltha palustris</i>           | <i>Plantago Virginica</i>           |
| <i>Cardamine rhomboides</i>       | <i>Pyrus coronaria</i>              |
| " <i>hirsuta</i>                  | <i>Potentilla Canadensis</i>        |
| <i>Carex alopecuroides</i> (169)  | <i>Quercus coccinea</i> (168)       |
| <i>Cornus florida</i>             | <i>Ranunculus abortivus</i>         |
| <i>Capsella Bursa-pastoris</i>    | " <i>recurvatus</i>                 |
| <i>Caltha occidentalis</i>        | " <i>septentrionalis</i>            |
| <i>Dentaria laciniata</i>         | <i>Rumex acetosella</i>             |
| <i>Fragaria Virginiana</i>        | <i>Silene Pennsylvanica</i>         |
| " <i>virga</i>                    | <i>Stellaria media</i>              |
| <i>Diarrhiza Americana</i>        | " <i>pubera</i>                     |
| <i>Gaylussacia resinosa</i> (160) | <i>Sassafras officinale</i>         |
| <i>Galium Aparine</i>             | <i>Sisymbrium Thaliana</i>          |
| <i>Geranium maculatum</i>         | <i>Succisa helianthis</i> (162)     |
| <i>Houstonia caerulea</i>         | <i>Taraxacum officinale</i>         |
| <i>Juglans unicea</i>             | <i>Vaccinium corymbosum</i>         |
| <i>Juglans nigra</i>              | " <i>vacillans</i>                  |
| <i>Luzula campestris</i>          | <i>Viola cucullata</i>              |
| <i>Lithospermum arvense</i>       | " <i>ovata</i>                      |

\* The seeds germinated readily. All within 5 days. I observed 2 kinds of seedlings, that is with two kinds of cotyledons.

*Viola pedata*

" *primulaefolia*

" *scaberrima*

" *blanda*

*Veronica minor*

*Veronica peregrina*

" *arvensis*

*Vaccinium stauvium* (1611)

*Viburnum prunifolium* (164)

701  
May 7 Clifton Park. The "staminate" Birch near the mansion house was <sup>still</sup> in bloom. Learned to-day from Mr. Talbot that there is a fine tree in Waverly. One also in the jail-yard and one in Mrs.

702 9 All-day trip to Glenburnie and vicinity. I left home at 7 A.M. rode to Brooklyn and then walked. When near Lehigh I visited the grove of Populus grandidentata to see if the fruit of the one pectillate tree were ripe. It is ripe and the cottony seeds are now scattered all over the ground.

Arrived at Furnace Branch I entered the woods on the left. I was pleased to find the Pitcher Plant already in bloom. This seems to me rather early for this plant. What is it that is in the flower, that makes it attractive to cats? Cats are attracted to them very quickly.

Just before reaching the old furnace, I found a pretty spot where I rested & ate my lunch. While eating, a pretty humming-bird came along. It flew to the blossoms of Gaylussacia ~~sp.~~ *resinosa*. It was a pretty little creature with a brilliant red spot on its throat. The red was about the same color as that of the flowers. To-day, I had an opportunity to see one of these birds at rest. Just before the humming-bird came, a large bumble bee was busy with the blossoms.

After eating my lunch, I went to the old furnace and then to the outlet of Tinder Creek. Finding the tide too high, I was obliged to go up to the road. My objective point now was the inlet below Tinder Creek. This I reached without difficulty. I found the locality quite interesting. While going along one of the old wood roads I frightened a buzzard off of her nest. I say nest, but there was no attempt made in the making of one. A large fallen hollow tree served as nest

Two large brown spotted eggs were observed

From the point where I approached the inlet, I could see that near the head it branched. All along <sup>here</sup> within a few feet of the shore, growing with Myrica cerifera was Gaylussacia frondosa. While on my way towards the source of the first branch I passed a large plant of Cypripedium acule. There were 7 plants 6 of which were in flower. Last year there were 5 which produced fruit. I marked the spot - a large pine closely was slightly blazed. The plant is not far from the stream, only a few feet from it.

Continuing up the stream, I came to an old deserted habitation. It was on a road, the one I always take to go to the Celastrus scandens locality. I now followed it, and crossed the country to Marby Branch. The large water passed through are generally those of the Hammond's. When I reached the branch I saw that I was some distance down the stream - even as far down as the island.

I went up stream now to Obrecht's (now taken care of by a colored man named Queen), proceeded then to Glenburnie by way of road through the country and the Shothine from G. home by way of the Annapolis Rd. The Red Maple fruits are now ripe. I observed that the leaves of this maple are not uniform, some are nearly smooth on the under side, whereas others are quite pubescent - or can this be the same tree observed Saturday and taken for A. nyctium. This maple question is becoming quite interesting.

Observed to-day, in fact already on Sunday that my Equisetum hiemale cuttings ~~were~~ putting forth roots. These grew out from the nodes. Not only from the node in water but also from the one above. I see none at the injured end.

May 9  
(continued)

Plants in bloom, v. also p. 165.

*Arenaria serpyllifolia*  
*Anthoxanthum odoratum*  
*Achillea officinalis* (188)  
~~*Blechnum papaver*~~  
*Barbarea vulgaris*  
*Arabis nudicaulis* (179)  
*Azalea nudiflora*  
~~*Asperula*~~ *Buna pastori*  
*Comandra umbellata* (190)  
~~*Cornus florida*~~  
*Cerastium vicorum* (191)  
*Euphorbia speciosa*  
*Fragaria vesca*  
*Gaylussacia frondosa* (185)  
 " *resinosa*  
*Geranium Carolinianum* (183)  
*Galium aparine*  
*Houstonia procumbens*  
*Iris verna* (180)  
*Lithospermum arvense*  
*Lepidium campetris*  
 " *Virginicum*  
*Lamium amplexicaule*  
*Lilium Canadense* (189)  
*Medicago lupulina*  
*Marula Crotalaria* (176)  
*Myrica cerifera* (182)  
*Medula Virginica* (186)  
*Morus rubra* (187)  
*Nepeta hederifolia*  
*Oxalis stricta*  
*Oenothera cinnamomea* 177

*Veronica arvensis*  
*Maianthemum Canadense* (194)

*Oenanthe aquatica*  
*Poa pratensis*  
 " *annua*  
*Pinus strobus* (184)  
*Prunus cerotina* (175)  
~~*Potentilla Canadensis*~~  
*Platanus occidentalis*  
*Pyrus arbutifolia*  
 " " *var melanocarpa* (192)  
*Polygonatum biflorum* (193)  
*Quercus prinus* (178)  
*Rubus Canadensis*  
*Ranunculus abortivus*  
 " *repens*  
 " *bulbosus*  
*Rumex acetosella*  
*Stellaria media*  
*Sisymbrium Thibetum*  
 " *officinale* (170)  
*Smilax glauca* (171)  
*Sarracenia purpurea* (181)  
*Taraxacum officinale*  
*Trifolium pratense* (173)  
 " *repens* (174)  
*Viola cucullata*  
 " *palustris*  
 " *primulaefolia*  
*Vicia sativa* (172)  
*Vaccinium vacillans*  
 " *corymbosum*  
 " *stamineum*

(64)

May 10 Planted last Friday (May 5) Maple hys (*A. dorycarpum*). Those in soil have not yet come above ground. Of those in paper, 87½% of seeds have already germinated and over 50% of the fruits

- May 11 <sup>703</sup> A trip with Div. A. of the Botany Class along Herring Run. We went the usual route  
Plants in bloom  
*Valerianella olitoria* (195)      *Linum alba* (197)  
*Ornithogallum umbellatum* (196)      " *princeps* (198)  
*Lycium vulgare* (199)  
*Lycium vulgare* was found already Tuesday, May 9.  
 The keys of *Acer dasycarpum* were examined again, all of the seeds have germinated.  
 Heard to-day from Miss Russell that *Calthea palustris* can be found up the stream (Herring Run) farther.
- 704 12 With Div. B. of the Botany Class from Columbia Av. to Wilkins Av. along the falls. We spent some time examining the mulberries and noted the differences between *M. alba*, *M. rubra* and *Broussonetia*. We found on this trip very much both of the White and the Red Ash - *Fraxinus Americana* & *F. pubescens* <sup>in F. pubescens</sup> beside having its branches pubescent we noted also that its leaflets are less serrated. On this trip *Ornithogallum umbellatum* is to be found. *Cataegus Cune-galli* is just beginning to flower, whereas *C. coccinea* is just about through blooming.  
Plants in bloom.      *Dactylis glomerata* (206)  
*Cataegus coccinea* (204)      *Salix parviflora* (200)  
*C. Cune-galli* (205)      *Veronica Bartramii* (201)  
*Rhamnus celerata* (202)      *Morus alba* (203)  
 There is now very little fruit remaining on the slippery elm.  
 The keys too of *Acer dasycarpum* have nearly all fallen.
- 705 13 Repeated the trip of April 20, this time alone. I wished very much to examine the maples along the avenue to Hampton. The tree which was in bud last time, the buds so large that I thought the tree probably a Buckeye is the Sycamore Maple. And the large maple which then was just beginning to bloom, yellowish green blossoms appearing with the leaves terminating the shoot

May 13  
(continued)

I find in the Sugar Maple. I see now, that I made a mistake in supposing that I had found a Sugar Maple last week (v.p. 170). The leaves of the Sugar Maple do resemble somewhat those of the Norway Maple. I observed that they are somewhat thicker in texture and of a darker green. I observed, too, that they are ciliate along the edge. The fruits of the Sugar Maple are quite different from those of the Norway Maple. The ovary is quite inflated and the wing is almost at right angle to the ovary. I burst open a number of the inflated ovaries, but observed that in each case the <sup>small</sup> embryo had not yet begun to develop. This was observed also in the case of the Sycamore Maple, but in this case the ovary was not inflated, the space being occupied by hairs that had grown out from the inside wall of the ovary.

Columbine is now in all its glory. The hillside around the Pellaea atropurpurea spot are one mass of bloom. Here, too, are a number of fine Baccharis.

The Sycamores are still in flower. I observed that the pistillate heads are the terminal flowers of the pseudo-terminal heads only, as a rule, and the terminal flowers from the buds next below are generally all staminate, however, <sup>frequently</sup> sometimes the first bud below the pseudo-terminal is also pistillate and occasionally even the second bud, but very rarely the 3<sup>rd</sup>. Generally one finds the pseudo-terminal bud alone with the pistillate flowers and then three buds below each with a staminate head. The fruits of one of the buds were counted. There were 1030.

The Egerton school has been at Glen Ellen since May 1, Mr. Aycock says this is probably their last year as they have bought a tract of 9 acres at Roland Park. He seems to be doing very well, clearing \$900 the first year. He pays Brack \$250 a year for the place.

It was now already afternoon and I had eaten my lunch. I now hastened onward to the Meredith bridge. To-day I went along the bank of the river, but it is hardly worth the trouble.

+ Generally 3 buds - the terminal & 2 lateral next below  
became leafy shoots; the terminal & the one next below had pistillate  
flowers, but all had staminate.

177

Nothing of interest is found until one comes quite close  
to the road as the large fields extend nearly to the  
river. Here, however, are quite a number of Black  
Walnuts - Juglans nigra, now in full bloom. I observed  
that the pistillate flowers are <sup>strictly</sup> terminal and appear  
only after the 6-9 leaves <sup>of the terminal bud</sup> have expanded, the staminate  
flowers develop from the <sup>3-5</sup> axillary buds below, generally  
two catkins from <sup>some</sup> each <sup>leafy</sup> bud, the one above the other  
the one coming  $\therefore$  from the axillary bud & the other from  
an accessory bud. In only one case did I find  
a small poorly developed staminate cone from the  
axile of one of the scales of the terminal shoot.

In the Hickory, however, this was the general  
rule the pistillate flowers were terminal and appeared  
always only in terminal buds, <sup>and the lateral bud next below</sup> then from the axils  
of several of the lower scales there appeared staminate  
catkins, <sup>always a short branch with 2 catkins</sup> and also a few from the axillary buds <sup>below the leafy</sup> <sup>& shoots</sup>.

After I had passed the fields and came to the  
wooded region it was fine. Just after leaving the  
fields there is a large area where several fine patches  
of Polygonatum giganteum is to be found. There too  
is plenty of Mertensia.

I was now at the Dicentra place close to the  
road and had stopped to examine the above ground  
shoots of the Erythronium, having dug up a plant and  
observed that the bulb had practically disappeared  
and that the white shoot had grown out from it -  
when I observed a young man coming up the road  
with his bicycle. I soon learned that he was Mr.  
Swartz instructor in biology at the Hopkins, he had  
come from Cockeysville and was on his way to Loch  
Raven. He seemed to think that the bicycle was  
a most efficient assistant on such an excursion.

I continued my trip up to the spring and then  
crossed the hills to the Merryman Branch. I came out right

May 13  
continued

at the Caltha spot. The next time I am in this locality I will learn more about the path I came down and which brought me right to this spot. Here too is a spring, and a foot-path. I now went down the road a short distance and then along the stream itself. While going along the stream I made my most important find of the day.

Magnolia Umbrella in profusion and best of all in flower. When I got down to the Dulemy Valley Rd, I harkened onward to Townson. When I came to the Eggenetum humale spot, I took several specimens, I observed that those that had fruited were now branching near the top.

Flowers in bloom v.p. 160 those marked ✓ are included.

<i>Anemone thalictroides</i> (✓)	<i>Bromelia papyrifera</i>
<i>Asimina triphyllum</i>	<i>Lepidium campetris</i>
<i>Thoxanthum odoratum</i>	<i>Magnolia Umbrella</i> (220)
<i>Asparagus officinalis</i>	<i>Morus rubra</i>
<i>Asimina triloba</i>	" <i>alba</i>
<i>Cornus florida</i>	<i>midcago lupulina</i>
<i>Chrysanthemum leucanthemum</i>	<i>Nepeta Glehoma</i>
<i>Crataegus cocinea</i>	<i>Nyssa sylvatica</i> (209)
<i>Cornus alternifolia</i> (212)	<i>Nasturtium Armoracia</i> (214)
<i>Cynoglossum officinale</i> (210)	<i>Osmunda Claytoniana</i> (214)
" <i>Virginicum</i> (211)	<i>Oxalis violacea</i> (213)
<i>Cardamine rhomboides</i>	" <i>stricta</i>
<i>Celtis occidentalis</i>	<i>Osmorhiza brevistylis</i>
<i>Crataegus mitans</i>	<i>Poa pratensis</i>
" <i>viscosum</i>	<i>Podophyllum peltatum</i>
" <i>vulgatum</i>	<i>Prunus serotina</i>
<i>Eragrostis bellidifolia</i>	<i>Platanus occidentalis</i>
<i>Fragaria Indica</i>	<i>Polemonium reptans</i>
<i>Galium Aparine</i>	<i>Paulownia imperialis</i>
<i>Geranium maculatum</i>	<i>Ranunculus recurvatus</i>
<i>Hydrophyllum Virginicum</i> (216)	<i>Rubus Canadensis</i>
<i>Houstonia caerulea</i>	<i>Rhododendron nudiflorum</i>
<i>Juglans nigra</i>	<i>Ranunculus septentrionalis</i>
	<i>Robinia Pseudacacia</i> (221)
	<i>Sorbus racemosa</i> (218)

*Stellaria longifolia* (215)

*Staphylea trifolia*

*Scigambrium officinale*

<sup>also S. 11.05</sup>  
*Smilax herbacea* (207)

<sup>S. 12.05</sup>  
*Sanicula Marylandica* (208)

*Trifolium pratense*

*Trifolium repens*

*Veronica americana*

" *Americana* (217)

*Viburnum prunifolium*

*Viola bicolor*

" *pedata*

*Viola pinnatifolia*

In the little garden at the foot of the hill just beyond Pawson is a nice patch of *Sedum ternatum*. It is now in full bloom. I was given some of it and will try transplanting it.

(Between <sup>near</sup> Hampton & Glen Ellen) there is a large *Morus rubra* now dying. It is more than 2 feet in diameter.

Much *Barbarea vulgaris* and *B. praecox* were observed to-day.

The two species are generally fairly distinct and can <sup>now</sup> be readily separated one from the other as follows. The pods of *praecox* are from 2 1/2 to 3 inches long and stand away from the stem, those of *vulgaris* are only about half as long and are appressed; however, there seems to be a hybrid (?) which although with the general characteristics, short pods, etc., <sup>the pods</sup> spread slightly from the stem not however so much as in *praecox*. Then the leaves of the upper part of the stem are quite marked. Those of *vulgaris* are quite broad and only slightly indented, those of *praecox* are pinnately deeply lobed.

Observed that the fruits of the huck are terminal, occasionally only do we find some vigorous shoots with ~~one of the~~ a fruit also in the first (axillary) leaf below the terminal. The fruits of *Celtis occidentalis* are axillary.

May 14 <sup>706</sup>

A short trip to Brooklyn. I hoped to find *Urtica perfoliata* still in bloom but was too late. It is remarkable what a difference there is in time of flowering between the same plants growing in the Piedmont region and those in the Coastal Plain. *Smilacina* was just beginning to flower in the region where I was yesterday, here they were in full bloom and fading. Not a *Liriodendron* could be found in flower yesterday, to-day I saw a number of the

\* On May 15 found in Mandak St.

*Sagittaria procumbens* (228)

May 14  
continued.

trees in full bloom. *Rhus toxicodendron* likewise.

I stopped to observe the Broussonetia or Paper Mulberry. I observed that the staminate catkins are nearly always <sup>two</sup> in number to the shoot and arise from the two lowest <sup>bud-</sup> scales. In one or two cases only did I find a third catkin, which grew from the axile of the first leaf - a small poorly developed affair. The pistillate heads were generally three in number although frequently four were <sup>counted</sup> <sup>the alternate</sup> three all, except the lowest grew from the axiles of leaves, the lowest grew from the axile of a scale.

The flowers of the Wild Cherry - *Prunus serotina* are also terminal. These large racemes and a few leaves, arise from axillary buds, I saw no terminal bud thus with flowers.

Flower in bloom

*Rubus villosus* (222)

" *strigosus* (223)

*Rhus toxicodendron* (224)

*Liriodendron Tulipifera* (225)

*Hemlock Americanum* (226)

*Hieracium venosum* (227)

707 16

A trip to the ravine. \* I took the route down Hilton Av. to the path leading in to Fox Run. On Hilton Av., I found again *Priosteum angustifolium*. After turning in from Hilton Av. a short distance, I decided to stop and eat my dinner. After eating, I walked off to the right and a short distance away came to a depression where *Equisetum hiemale* and *Symphlocarpus fortior* were growing in the greatest profusion. I took several of the stalks <sup>of the former</sup> for experimentation.

When I came to the spot where I cross the run, I turned up the stream, as I wished to visit the *Myrica cerifera* <sup>place</sup> spot.

I had some trouble locating the plants, no doubt due to the fire which I think has destroyed some of them. I now went down the small stream, and was surprised to find that it was a tributary of Fox Run. I now made a nice discovery. I got up on the bank of the stream and here I found a path. I thought of finding out where it went, when I observed a marked tree and knew it was the same path along which I had gone a short time before. But when I got on the path I observed also another branching from it. At once it came in

my mind that this was the path to the Lilium Philadelphicum place. I followed it up, and sure enough, it was the same path which I had been looking for all last summer. I went up as far as the big tree then returned. Some time in the near future, I will go beyond the tree and learn the path anew. The lilies are not flourishing, I do not think there will be many flowers this year.

I now followed the stream down into the ravine. Reaching the ravine, I visited the spot where I had transplanted the Aplectonum angustifolium. It was in fine condition having 7 fine fronds. I ~~then~~ tried to find the Yellow Cypripedium but failed. I could not even find the plant. I now went up the brook to Owl Spring. I found Aplectonum humile in bud and Liparis liliifolia just in bloom. My Hepatica acuta looks fine. To-day was Robin & Chorizanthe day both were found in profusion. I examined the Chorizanthe Virginica and observed that the terminal bud is a leaf-bud the next two pairs of buds immediately below it lie dormant. Immediately below these are two pairs of buds each terminating with a pair of bloomer. These dormant buds are no doubt leaf buds and grow only if terminal bud should be injured. The branches with flowers drop off entirely leaving scars.

Plants in bloom. v. pp. 159 x 161 +

<u>Anthoxanthum odoratum</u>	<u>Gillenia trifolia</u> (238)
<u>Aster multiflorus</u>	<u>Hebea venosum</u>
<u>Arabis medicaria</u>	<u>Hydrophyllum Virginicum</u>
<u>Chorizanthe Virginica</u> (229)	<u>Houstonia purpurea</u> (246)
<u>Cypripedium parviflorum</u> (243)	<u>Liparis liliifolia</u> (244)
<u>Dactylis glomerata</u>	<u>Liriodendron Tulipifera</u>
<u>Chamaelirium Carolinianum</u> (239)	<u>Medicago Virginica</u>
<u>Desmodium illinoense</u> (240)	<u>Medicago lupulina</u>
<u>Erigeron bellidifolius</u>	<u>Oxalis stricta</u>
<u>Galium parviflorum</u> (232)	" <u>violacea</u>

May 16  
(continued)

*Poa pratensis*  
*Plantago lanceolata*  
*Potentilla Canadensis*  
*Polygalla Senega* (237)  
*Robinia Pseudacacia*  
*Rumex Acetosella*  
 " *crispus* (233)  
*Solea concolor* (242)  
*Sisyrinchium* (245)  
*Senecio herbaceus*

*Polygonatum biflorum*  
*Smilax herbacea*  
*Lonicera Marylandica*  
*Salvia lyrata* (230)  
*Trifolium pratense*  
 " *repens*  
*Trisetum angustifolium* (236)  
*Vaccinium stamineum*  
*Viburnum acerifolium* (241)  
*Zizia cadeta* (234)

*Zizia aurea* (235)

- 708 18 With Section A. from Bonnie Brae to Franklin Rd then to Winans Woods and back to Edmondson Ave. The most important thing noted was the finding of the green oak ash. It is quite plentiful on the hill side going down to the road. The Fringe Tree was to-day in all its glory. My idea of going out to Winans was to see if possibly a Yellow Ladyslipper might be found. none, however, were found.

Plants in bloom

*Dianthus Armeria* (247)  
*Silene antirrhina* (248)

*Cornus alternifolia* (250)  
*Osmorhiza longistylis* (249)  
*Tradescantia Virginica* (251)

- 709 19 With Section B. from Windsor Mills Rd to Dickeyville. More *Fraxinus viridis* was found. Near the car terminus is a fine *Acer Negundo* full of fruit. I stopped to examine the keys, which apparently are about full size. No seed was yet to be found only the small undeveloped ovule. Last Sunday I examined the fruits of *Acer platanoides* <sup>vide May 21.</sup>; these too are about full size, still the <sup>seed</sup> fruit appeared only as papillae. When boarding the car saw a lady with some *Lonicera sempervirens*, she undoubtedly got it close by.
- 710 20 An all-day trip with the Botany Sect. of the Md. Academy of Sciences to Round Bay. We left Camden Station on the 8.30 A. M. train arriving at R. B. about 15 min. past 9. We took the route to the Cypress Swamp and the Cranberry swamp. The Pitcher Plant was still in bloom much to our satisfaction. While some of the members were getting specimens of this, I

- \* I was surprised to find Lillium here, I thought it was a plant of the Piedmont region.
- o All over the place many Saxifrage trees were found. I noted that the foliage here is quite soft & pubescent.

tried to dig up some plants of Comandra to study their parasitism. The results were rather uninteresting, once only did it appear that a root was slightly grown to that of another plant. None of the plants at the Cranbury Swamp were in bloom - no Polygonum, no, Cranbury, no Habenaria. The Pitcher Plant only was still in bloom. We crossed the inlet and selected a nice place on the hillside to lunch. After dinner we went to Round Bay. On the way found a nice colony of Pyrola chlorantha. Arrived at R. B. we proceeded to the shore, refreshed ourselves with some of the good water, rested a while, and then walked along the shore and back to the tracks through the woods. We had opportunity to see both fertile and sterile trees of the Nyssa sylvatica and also of Ilex opaca. In both we find that the staminate blossoms are inclined to be quite numerous whereas the fertile ones in the case of Nyssa are generally only 2 or 3 and of Ilex only one. Comparing the leaf of Nyssa with that of Diocypus, we observed that that of the latter is ciliated finely along the margin and is inclined to be oval rather than elliptical as with the former. Kalmia is in full bloom so also Leucothoe racemosa. Robinia is done blooming.

Plants in bloom

- Andromeda Mariana (252)
- Comandra umbellata
- Dicentra flexuosa (262)
- Euphorbia spenciana
- " corollata (259)
- Lillium trifoliatum
- Saxifrage caroliniana
- Hypoxis erecta
- Linum catharticum
- Helianthemum Canadense (253)
- Ilex opaca (258)

- Juncus (265)
- Krigia Virginica
- Kalmia angustifolia (255)
- " latifolia (254)
- Lupinus perennis
- Leucothoe racemosa (256)
- Linaria Canadense
- Magnolia glauca (257)
- Medeola Virginica
- Osmunda regalis (260)
- Orabi stricta
- Pastinaca sativa (263)

May 20  
(continued)

*Pyrola chlorantha* (261)  
*Plantago lanceolata*  
*Potentilla Canadensis*  
*Polygonatum biflorum*  
*Robinia Pseudacacia*  
*Smilax glauca*  
*Sisyrinchium*

*Trifolium repens*  
" *pratense*  
*Rumex Acetosella*  
*Rubus villosus*  
*Rubus Canadensis*  
*Vaccinium stamineum*  
*Vicia sativa*

*Viola primulaefolia*

711. 21 To Brooklyn and vicinity

I was pleased to find *Chironanthus* growing in my favorite ravine and also along the river. I tried an experiment to-day - I removed the terminal leafy shoot from quite a number of the growing ends on one side of two different trees - one in the ravine and one near the end of my usual walk. I noted that the trees here had the buds arranged thus: - the terminal bud was leafy, the next two buds immediately below <sup>one opposite the other</sup> were dormant, and the next two pair generally were flower buds. My experiment was to see if the dormant bud would grow.

I examined the *Norway Maple* and noted that the seed has become larger it can now be noticed from outside, it is still however, quite small compared with the large cavity (ovary)

Plants in bloom

*Celastrus scandens* (266)

*Eucalyptus Americana* (267)

712. 23 First to Mt. Winans. Then across the country to Irvington. Then by car to Catonsville, from there to Old Pump House, along the river to Hollerfields, then home by way of B & O R. R. to Ellicott City where I took the electric car. Left home at 8 A. M. and proceeded by way of B. & O. to Mt. Winans. Just beyond the village & near the old glass-house site I found *Aconitum Canadense*; it was in bloom. The object of my trip to-day was to find *Calapogon*. Mr. B. told me it was quite plentiful in the swampy spot where the *Habenaria* is found. I searched very carefully, but failed to find a single plant. I now walked across the country towards Irvington. Parts of this trip were fine.

It was nearly 12 o'clock when I reached Frederick Rd and took the car for Catonsville. Arrived at the terminus I proceeded to Rolling Rd and

then to the old Pump House. On Rolling Rd I passed a nice row of Sugar Maples. A tree, too, was observed in London Park - western edge along fence and just south of Frederick Ave. I observed to-day that the Poplars in the garden on west side of Rolling Rd with pinnate catkins are most likely P. grandidentata. Chimaphila was observed quite frequently some near Mt. Winans, and more here in the ravine near the Pump House. I observed that the terminal bud <sup>became</sup> ~~was~~ a leafy shoot and that the flowers grew from the axillary buds of the second & third pair below it just as in the case of those found in Brooklyn. Having reached the Patapsco I proceeded along the bank to Hollandsfield. To-day I found the Arisaema Dracontium in bloom. A day or two earlier would have been the best day to see them at their best, however, many were still found and I secured several specimens. At two different spots, I marked a number of plants, so that I might be able to find them this fall in case I should want a specimen.

The first spot was just beyond a fall tree trunk lying right across the path and cut close to the path. Small sticks were stuck close to the plants. A second spot close to a very large Sycamore was also marked. The tree was giving a deep lean on the side facing the path; the plants were close to a little seedling Ash. On opposite side of the path were some plants also. The Shades of Death are now almost impassable. Another fieldstone quarry has been opened and a road cut to the spot. All the dirt and debris have been thrown down the hillside. Asplenium angustifolium was observed in fine condition. Arrived at H. I crossed the river then proceeded along railroad tracks to Edlitt City, where I took the car for home. Cypripedium parviflorum was found in bloom.

Plants in bloom.

Agrostis alba (269)

" vulgaris (270)

Azalea viscosa (278)

Andromeda Marcia

Arabis nudicaulis

*Acuminata tubosa**Acorn balsamum* (276)May 23  
(continued)*Azalea nudicaulis**Aquilegia Canadensis**Asclepias quadrifolia* (284)*Arenaria corymbifolia**Arisaema Dracontium* (286)*Bromus cecalinus* (279)*Comelina ciliata* (272)*Comandra umbellata**Chorizanthe Virginica**Chelidonium majus**Cardamine rhomboides**Cypripedium perfoliatum**Chamaelirium Carolinianum**Echinops vulgare* (271)*Ceranium Carolinianum**Ellenium trifoliatum**Galium Aparine**Heschera Americana**Heracleum lanatum* (285)*Houstonia purpurea**Holcus lanatus* (279)*Hypoxis erecta**Houstonia caerulea**Helianthemum Canadense**Heiacium venosum**Vaccinium stamineum**Zizia cordata*

I was pleased to find *Azalea nudicaulis* near Mt Wm, at the *Helianthemum*. I found that plants of the former when growing in wet places, must bloom earlier; at any rate, there were in full fruit whereas those growing in drier places were still in flower.

713. 25 To Curtis Bay. Over usual route

Plants in bloom.*Poterium Sanguisorba* (290)*Kalmia latifolia**Linaria vulgaris* (275)*Melilotus officinalis* (268)*Medicago Virginica**Medicago sativa* (282)*Nasturtium palustre* (274)*Nephele adnata**Nepeta Glechoma**Oxalis stricta**" violacea**Ornithoglossum umbellatum**Physocarpus opulifolius**Polygonatum biflorum**Rosa lucida* (273)*Rhus toxicodendron**Succisa berula* (287)*Salvia lyrata**Smilacina racemosa**Sanicula Canadensis* (289)*" Marylandica**Sisyrinchium**Sisyrinchium**Sisyrinchium "**Thalictrum polygamum* (283)*Trifolium agrarium* (281)*Viburnum dentatum* (276)*Peltandra undulata* (291)

\* Some well-developed peach were examined. The stone although quite pronounced ~~had~~ not yet hardened  
Monotropa uniflora was observed just showing itself.

714.  
May 26 Herring Run. Usual route.  
A solitary specimen of Anemone was still found.  
Viburnum acerifolium was found in great profusion.
- 715 27 A boat trip. The morning was cloudy and there was scarcely any breeze. However, towards ten o'clock there were better prospects. It was 10 o'clock when we left the fort. The wind being from the south-east and the wind light, our progress necessarily was very slow. It was therefore, close to one o'clock before we reached Custer Bay. Here we pitched anchor, ate our lunch, and then got ashore to botanize. The Kalmia was at its best and there was a great deal of it. Lysimachia was found in bloom for the first time this season. There was, however, a scarcity of flowers, and with the exception of the Lysimachia & Specularia no new plants were found. Ilex opaca is still in bloom. Towards 4 o'clock we were again aboard the boat and at 7.30, thanks to a lift from one of the naval reserve boats we were back to the boat house.
- Plants in bloom  
Lysimachia quadrifolia (292)      Specularia perfoliata (293)
- 716 28 To Brooklyn. The Norway maple fruits are about the same as last week - the fruit is scarcely larger. The grape is now in flower.
- Plants in bloom  
Vitis cordifolia (294)      Trifolium pavenum (295)  
Achillea millefolium (296)
- Pine Oak - Rhus toxicodendron and Celastrus scandens are still in full bloom.
- 717 30 Decoration Day. My trip to-day was from Towson to Providence Rd and return. After going out the Joppa Road a short distance I turned north and entered the woods. I proceeded then in nearly a north-easterly direction, particularly so after reaching the big pile of saw dust. This part of my trip was very pleasant. When only a short distance past the saw dust I came to road leading along side of the fence of the big field. I had little trouble

May 30  
(continued)

picking out the way. At one place I came to a clearing more more or less covered again with Juniper. After going through this I came to a path again. While walking along this path, I saw a small side-path. It looked quite inviting and so I entered to investigate. I was just going to leave it when I observed a new *Batycheum* right at my feet. Closer investigation showed me 10 specimens of what proved to be *B. maticariaefolium*. I now observed closely where the road was likely to lead. First of all I marked a Juniper (with a piece of ungalvanized wire) that was standing on the road right close to the spot where the plants were found, I then observed, that if I kept going straight ahead (for the road becomes rather indistinct) I have several very large trees on my right and presently come to a large oak with its top broken off. Keep this tree to the left and keeping in the same direction I came to an open field and was soon on Providence Rd. I now proceeded out Providence Rd, to the now well-known to me "No thoroughfare" sign. I followed this road, thinking I would soon come to the *Veronica hederifolia* spot, but I had forgotten that to go there I would have to take the first side road leading to the left, and kept in the main road. I soon observed that I was getting into new territory, but decided to follow it to the end. After awhile I observed that it led to <sup>the</sup> road to Glen Ellen, entering it just beyond the large avenue of trees, a little beyond the dairy. I now returned. Stopping a moment to look at the exposed rocks now on the right of the road I found several large patches of *luciwat*. Here, too, I found a nice patch of *Herperis matronalis*, but which was nothing when compared with what I saw later when I took (going back) the first side road going to the right. This road seemed to return to the Glen Ellen Rd so I followed it only to the brook. Knowing now which direction I must take I soon found my way back and learned also how to reach the Veronica. I then returned to Providence Rd. Went out this road almost to the village. Returning I took the road leading to Joppa Rd. I was very glad that I took this road

for here when within a short distance of the railroad I found a great many plants of Penstemon pubescens on both sides of the road; and just before coming to them, I found on the left side a hillside of Solanum Dulcamara. At the spring, I quenched my thirst and then proceeded to Joppa Road. This was an entirely new route, but a very nice one, I believe it a better one than the one along Cornwall Bridge Rd. On the Providence Rd, between the Cornwall Bridge Rd & the Joppa Rd I found a peculiar plant of Viburnum acerifolium.

Plants in bloom.

Aristolochia Serpentina (298)  
Anemone thalictroides  
Achillea millefolium  
Botrychium Virginicum (304)  
 " matricariifolium (305)

Camelina sativa  
Hemionis canadensis

" pubescens  
Hieracium venosum

Heperia matronalis (299)

Found the Aristolochia just as I entered the "No throughfare" road.

Leonurus cardiaca (303)

Nasturtium officinale (300)

Malva rotundifolia (302)

Oxalis stricta

Penstemon pubescens

Polygonatum giganteum

Rhus toxicodendron

Rosa lucida

Solanum dulcamara (301)

Veronica officinalis

Lychium Cathartica (297)

718  
 June 1 The Shirley Lane trip with Section A. The Sugar Maples were examined and we observed that the beautiful cilia, so noticeable in early spring have disappeared. Still we found that in the very young leaves, those still forming on the stem, there were still cilia. Our next observations were in connection with Morus alba. A small tree upon which the cut-lobed leaves predominated was observed to be sterile, the next tree observed was fertile and had very few, if any lobed leaves. And so it occurred quite a number of times. It had occurred so often that we thought the rule general. Then we found a tree with cut-leaves and fertile and no one or two more. It seems, therefore, that as a rule, the trees with the great number of cut-

June 1  
(continued)

leaves are sterile. This would seem to be what one should expect, and in correlation with the theory that the fertile trees are such as were growing under excellent conditions.

At the Eggenstein place, I secured several stems. New shoots are now appearing and some of these were taken also. I shall see if they root as readily as the old stems.

Here we found a solitary plant of Chamaelirium Carolinianum.

At the spring we found Myacotis laxa. I do not remember observing it here before. Pentstemon pubescens was observed near the edge of the woods.

### Plants in bloom

Myacotis laxa (306)

Lobelia spicata (308)

Rudbeckia hirta (307)

Lysimachia quadrifolia (309)

719.

2

To Brooklyn. I took with me a few plants of the species of Violet that were sent me and transplanted them, also a plant of Linnaea borealis. We were pleased to find the Euonymus still in full bloom. To-day was fern day, everybody enjoyed the pretty patches of ferns. There were immense patches of Dicksonia, of the Lady Fern, and of the New York Fern. But what we enjoyed most of all was the finding of several perfect plants of Osmunda regalis. There were 10 fronds beautifully arranged in a circle forming a most beautiful <sup>bowl</sup> vessel the sides curving out symmetrically the top forming a ten-rayed star. The Osmunda cinnamomea also formed pretty vases but they were not to be compared with those of the regalis. There grew a great many plants of Killenia trifoliata. On our way homeward we found two pretty plants of Liparis liliifolia.

### Plants in bloom

Lappa minor (310)

Sambucus Canadensis (311)

720

3

A trip in quest for the Painted Cup. My directions were that it could be found on Mr. Givins' place at Hampstead, Carroll Co., Md. Knowing that the plant was now to be found in flower, I decided to set out on an expedition and discover the plant, if possible.

I saw that my best route would be first to Emory Grove, and then by train to Hampstead. Left B. O. on the 7.30 A. M. car and arrived at

E. S. at 9 o'clock. Here I learned that I would have a wait of  $2\frac{1}{4}$  hrs. for the train, decided, therefore to set out afoot. This I did and arrived in H. about 10 minutes ahead of the train, a little tired but saving 40¢. The railroad company, to get ahead of the people because they use the electric road, charge them 4¢ a mile, in fact, 3¢ a mile from Woodensbury, making the fare to W. really more than 6¢ a mile, the distance from Glyndon to W. is about 2 miles and the company charges 15¢ fare. Hereafter I shall walk to Woodensbury.

My trip to H. was very uninteresting from a botanical standpoint. The road was up and down hill and through a rich farming region. One farm after the other was passed. Not a stretch of woods <sup>anywhere</sup> all along the road. Still, one interesting little find was made. On the right side of the road, opposite a pretty dwelling, about 5 miles out, I found a large patch of Ranunculus reptans, as near as I can make it, in which all of the stamens had been converted into leaves.

It was noon when I reached H. and careful inquiry along the road had provided me with the information to reach S's. In fact, I knew it fully when 6 miles from my destination. However, this did not prevent me from asking the way even when within a stone's throw of the house.

My intentions were to go directly to the home and be directed to the spot, but the route I took, took me to the plateau before it took me to the house. Still after collecting a few of the plants (there were not a great many) and a specimen of the Yellow Thistle, Cirsium horridulum, I proceeded to the house. Here, too, in this pretty meadow were a great many plants of Saxifraga Pennsylvanica. I found Mr. S. a fine man and his wife a fine woman. After chatting a little while we took a little walk around the place. In a springy part of the field grew a great many alders. Here, too, was Arnica montana. This too was growing with the Painted Cup.

On the hillside was growing Myrica asplenifolia which he knew as Balto. Shrub. He said it was excellent for curing the

June 3 chicken cholera. He makes a tea of it and gives it in the drinking water. He had Yarrow which he called Liver Regulator, he said he found it a most excellent medicine. I was surprised to find Aspidium cristatum on the road side leading to his home. Towards four o'clock we started for the station.

Plants in bloom

*Erigeron horridulus* (315)

*Gallium trifidum* var. (316)

*Cortillina coccinea* (314)

*Scrophularia nodosa* (317)

*Vitis Labrusca* (312)

*Verbena brevica* (313)

Mr. Girvin calls Holcus lanatus - Feather Grass.

724

- 6 A trip to Waterford, the Mayo, and the head of Rock Creek. I took the Curtis Bay car, proceeded to W. by route across the new bridges. I had little trouble finding the way and reached W. before noon. On the way found *Lysimachia quadrifolia* and also *L. stricta*, also *Pephus Virginiae*. Observed *Amelanchier Canadensis* attacked by the pearler black fungus growth. Arrived at W., I proceeded to the pond. At the head of the pond I found *Polygonum ophioglossoides* in bloom. There were not a great many plants, however, was pleased to find it there. Here too was *Utricularia cornuta* in full bloom, also fruited *Sphagnum*. I now proceeded towards the bridge. On my way stopped to examine *Opuntia*. It is in bud, but what attracted my attention most of all was that most of last year's fruits were still on the plant. They were in excellent condition. From the bridge, I proceeded out the road, hoping to reach the head of one of the tributaries of the Mayo, but did not succeed doing this to my satisfaction. However, did find the tributary and a road leading down to it. Here in the water found that peculiar Water Lilies - like Alga. After some searching and getting lost I found the woody swamp at the head of the tributary. Here grew *Ilex Virginiae*. I now had some more walking & some more getting lost. Finally, I reached the boat.

Plants in bloom.

*Arenaria subpyllifolia*

*Andromeda ligustrina* (318)

- Asclepias obtusifolia* (327)  
*Aporosa andromorpha* (339)  
*Cactaceae pinnata* (340)  
*Danthonia spicata* (320)  
*Danum Carota* (322)  
*Diripyrum Virginia* (323)  
*Euphorbia corollata*  
*Geranium Carolinianum*  
*Helianthemum Canadense*  
*Iris versicolor* (332)  
*Ilysanthus gramineus* (333)  
*Malva angustifolia*  
     " *latifolia*  
*Lysimachia quadrifolia*  
     " *stricta* (324)  
*Lupinus perennis*  
     *Verbascum Thapsus* (342) *Urtica*  
     " *Blechnum* (338)

- Mitchella repens*  
*Magnolia glauca*  
*Melampyrum Americanum* (334)  
*Nymphaea odorata* (330)  
*Oenothera purpurea* (341)  
*Polygonum virginicum* (331)  
*Potentilla Norvegica* (325)  
*Rhus copallina* (309)  
*Sperularia perfoliata*  
*Scirpus Thalictrum*  
*Rhus tinctoria* (328)  
*Rhus venusta* (337)  
*Solanum Carolinense*  
*Trifolium arvense* (321)  
*Tephrosia virginica* (326)  
*Utricularia cornuta* (325)

June 8

To Brooklyn.

Observed that the pistillate bearing plants of Paper Mulberry are less cut up than those with the sterile globose Every one American is still blooming.

Observed that many of the Golden Rods having young newly-formed "growing portion" curved over as was observed in case of Paper and Judas Tree. I believe that the explanation of this is that the newly formed part has as yet no tissues strong enough to keep it upright and it is the weight of the leaves which cause it to bend. I observed that it is only in rapidly growing plants that this takes place.

Dug away the soil again from around a Monarda hypoleuca and found a young shoot just coming up.

Plants in bloom.

- Asclepias variegata* (343)  
*Melilotus alba* (344)  
*Medicago sativa* (345)

726 June 9. Dickeyville to Gynn Oak Station  
Plants in bloom.

*Trisetum perfoliatum* (346)

*Rubus odoratus* (348)

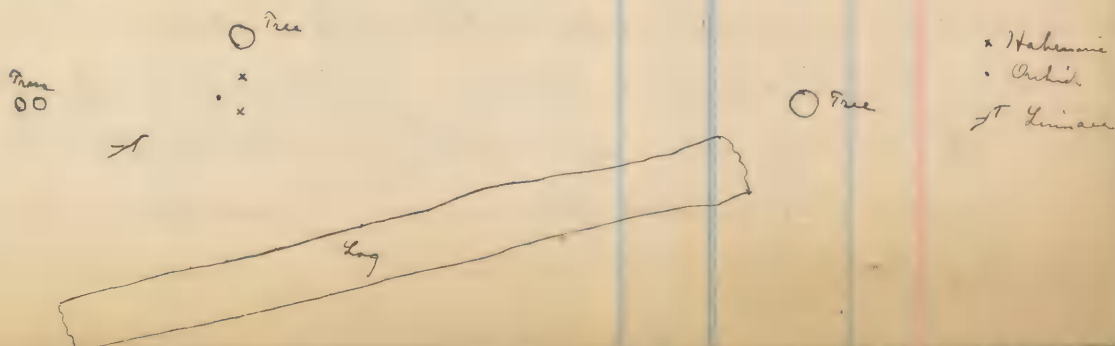
*Cirsium Virginianum* (347)

727

10 Along the Patuxent River from Alberton to Marriottville and then back to Ellwitt City. Left home before 7 A.M., reached E.C. about 8 o'clock. From E.C. I proceeded by way of Jonestown Rd directly to A. My trip was undertaken especially to find some hyacinth-like flower (?) observed by a member of my botany class just beyond A. My careful search however failed to bring to light anything closer to hyacinths than *Cimicifuga racemosa*.

As it was so very nice enjoying myself I decided to go as far as Woodstock. Then when I got to W., I thought it would be nice to go as far as the North Br. of the Patuxent. The stream here however is a little away from the railroad and although I felt sure this was the I had found the spot, I was upon closer observation, almost as sure that it was not the spot, thus, it came about that I got all the way to M. Observing though the narrowness of the river, I felt sure that I had passed the branch, and when M. came into view of course there was no further doubt. Upon my return from M. I observed that the branch enters just where I had thought at about telegraph pole  $\frac{26}{25}$  that is to say  $26\frac{3}{4}$  miles from the city. At this point there is a beautiful fall of the river. It plunges over a descent of about 20 to 25 feet in about twice that number of feet of its course.

On Friday I received two fine specimens of *Habenaria orbiculata*, these I took with me to-day and finding a fairly good spot just beyond Dorsey Run I planted them; they are even with telegraph pole  $\frac{22}{22}$ . The following drawing will mark their position.



On my way to Alberton, I stopped to examine a wheat field just beyond the Old Fredericks Rd. Some of the wheat had been attacked by the rust. The specimens attached were quite small. I secured some for study. Later I found rust on rye; nearly all the plants found that had grown up along the railroad were affected.

On a rock just beyond A. I found a peebler moss-like plant which I took with me to examine, whether moss or liverwort.

On my return found in A. quite a large black ash Fraxinus sambucifolia. It is the largest tree of this species that I have observed. Observed quite a number of Ash-leaved Maple Acer Negundo with 5 leaflets. The more I look at this form the more I am inclined to believe it a variety of the three-leaved form or vice versa; the keys are quite different in the two trees.

#### Plants in bloom

Asclepias phylicoides (356)

" puberula (351)

Aspidium adnigrum (358)

Andromeda ligustrina

Brunella vulgaris (June 2) (362)

Calistegia spithamea (359)

Cornus sericea (360)

Eriogonum strigosum (353)

" Phloxidifera

Fragaria virginiana (357)

Festuca elatior (358)

Scrophularia nodosa

Aquilegia canadensis

Hemerocallis fulva (361)

Kalmia latifolia

Lysimachia quadrifolia

Lonicera japonica (365)

Lysimachia nummularia (350)

Phlox maculata (364)

Papaver dubium (349)

Steironema ciliata (354)

Spirea Aruncus (June 1) (363)

Thasium barbinode

Tephrosia virginica

A number of fine Lindens are to be found near Alberton.

I was surprised to find Aquilegia still in bloom. Aspidium adnigrum is not in fruit. I was pleased to find the Phlox again appearing at Unwin Dam.

Veracellum is in full bloom, and so also Spirea.

A trip to the ravine. It was very warm, sultry and sticky. The woods so full of moisture, that there was no pleasure moving about in them. Decided, though, as

June 13  
(continued)

the day was so sticky to go to the ravine, as the best place for a trip. Proceeded down Wilton Av. to path leading to Fox Run. On way down turned off to visit the Lilium Canadense locality. I found the plants flourishing and in full bud. On roadside found Raspberries ripe. When I turned into the woods I proceeded to the run and then to the Lilium Philadelphicum spot, the plants however are not doing well none were found in bud. Found to-day in numerous places a beautiful white Myxomycete forming fairly large blotches on moist decaying logs. The spores were white and shook out quite easily. The entire Myxomycete formed a flocculent like mass. Deliquescing quite easily, I believe it to be a Ceratiomyxa.

Arrived in the ravine I returned to C. by way of main stream. I found a peculiar fungus growth on the stems (old?) of Epiphaeum, grayish-white in color, covering the entire plants. Kept a sharp look-out for Puccinia pinnata and finally found some in the old waterway of the brook near Owl spring.

#### Plants in bloom

Ceanothus Americanus (366)

Stenonema ciliata (367)

Asclepias variegata

Hydrangea arborescens (369)

Asclepias purpurascens (368)

Perhaps my best find to-day, was the finding of Selaginella apus in fruit.

729

15

A trip through the ravine with Batany, Claver & Dr. Gray of California. We took the route down Wilton Av., path to Fox Run and then through the ravine. Arrived on the Patuxent, we started homeward by way of the Observatory.

The moist sticky weather the past few days has been just the kind for the fungi. The white Myxomycete - Ceratiomyxa is very plentiful, found two, another with light brown spores.

The Corpse plant - Monotropa uniflora was found in several places.

#### Plants in bloom

Monotropa uniflora (370)

Baptisia tinctoria (371)

730

17

To-day was to be the trip of the Botany Section to Soldier's Delight. The weather however was unpropitious. The weather men said "Showers", and it looked that way, in fact there had been several little showers, before we even had time to start. Then besides, it was disagreeably warm, sticky. Miss S. was the only member besides myself, willing to go; but as the trip was to be postponed to next Saturday, Miss S. decided to return home.

I, therefore, set out alone. I got off the car at Berryman's lane. My little map showed where I might find an abandoned quarry, but as it was off from the road, something which I did not know, I was some distance away before I learned my mistake. However I finally found the place. Arrived at the quarry, I hastily investigated found no Palmeria, although other plants, similar to those found at Ben Hills were there. Secured a nice lot of Fumaria hyemalis. Proceeded down to the marshy ground where I found Gaylussacia dumosa a fine find. also Sphagnum in fruit. Here too was Selaginella apra in fruit, Drosera, one solitary plant of Polygonum oppositifolium. Had the weather permitted I should have followed one of the streams, but it was too wet (we had several showers) and the weather was too sticky. Returned, therefore to the road to Delight and ~~returned~~ <sup>proceeded</sup> to Owino Mills. Met a Mr. Howard, head manager of the quarry etc., also a Mr. Hemphling. Cherries plentiful and ripe.

Plants in bloom

Gaylussacia dumosa (372)

Pyrola elliptica (374)

Agave vivipara

(373)

731

26

Repeated the trip of June 17. To-day, I proceeded at once to the quarry. Found that Gaylussacia dumosa was done blooming. After securing specimens of Selaginella and plenty of Sphagnum which is now in full fruit I went to the spring and ate my lunch. I then returned to the Delight Rd which I learned was called Nicodemus Rd and started for the falls. I had not

June 26  
(continued)

proceeded very far, when I came upon a fine lot of Aletris farinosa. Here, too, grew some nice specimens of Pyrola elliptica. The road goes along the ridge. Here and there are patches of woodland. As one approaches the falls the scenery becomes prettier and here and there are large outcrops of rock.

Arrived at the falls, I crossed the bridge into Canoll Co., but returned almost directly and proceeded along the Deer Park Rd. One nice little find was made at the intersection of the two roads (D. A. x N.) a large patch of Monarda didyma. Later, I found another patch farther up the road. At the deserted house I found a fine Prickly Ash near the spring. While at the spring I observed how dark the western sky was and could hear the distant thunder. I thought that perhaps it would be wiser to stay at the old homestead, however, finally started onward, map in hand.

I soon came to an abrupt bend in the road, but mistook it as another entirely new road, as a private road entering at this point made it appear as the real continuation of the main road. As a consequence I found myself before long on private property and close to the falls again. Having learned of my mistake I started on the return. The storm now was close upon me so I decided to go back to the old house. This I did and there waited till the storm was past. I then proceeded again on my trip and this time found the road without trouble. I proceeded to Owings Mills & there took the car for home.

#### Plants in bloom

Monarda didyma, (375)

Aletris farinosa (377)

Chimaphila maculata (376)

Cerastium arvense (378)

Cherry trees are very abundant in this region, most of them were still laden with fruit. Raspberries and Blackberries are now quite plentiful.

July 1. A trip with Sollers from Carry to the Gunpowder, then along the left bank to Belair Rd and back again to the cars along this road. We arrived at C. at 8.45 A.M. On the way out we observed that the cane (v. Nov. 26, 1904) was growing just opposite the hotel in Carry. The trip beyond the mill was not so pleasant for a short distance for the growth in the fine alluvial soil was quite rank; however, after passing this we did very well.

\* *Weberia sessilis* (Schmid.) Lindb.  
 + *Hychnis Chalcedonica*.

199

One of the first things to attract our attention was the finding of *Equisetum hyemale* in fruit, this time the first new shoots. How are we to explain the finding of fruiting canes in the winter? No doubt the plant has a prolonged fruiting season and those that fruit late retain their spore through the winter. I shall examine into this matter closer. A pretty moss with peculiar closely sessile capsules was found on the hillside about a mile and  $\frac{1}{2}$  down stream. Then at another place we found some *Onocnemis Virginiana* D.C. We observed quite frequently large specimens of *Cacalia reniformis*. This plant is possibly a biennial. At any rate besides flowering plants many others not flowering with immense leaves and stems were observed. At first I thought these were specimens of *Helianthus*, but observed later that this plant had only ternately compound leaves. We ate our lunch on the bank of a little rivulet. It was then 12.30 P.M. It must have been nearly 2 o'clock when we crossed the broad Long Green tributary. Just beyond this one comes to a fine path. Here too we found *Selaginella apus* in abundance also plants of *Arisaema Dracontium*.

On our homeward trip we were overtaken by passing showers but they were not heavy enough to make us very wet.

Just before coming to Putty Hill <sup>we</sup> passed a garden in which grew a pretty pink\*, we failed to recognize it.

Collected also a *Myxomycete* during early part of the trip.

Flowers in bloom

*Lilium Canadense* (381)

*Cacalia reniformis* (383)

*Equisetum hyemale* (380)

\* *Hychnis Chalcedonica* (386)

*Elymus striatus* (385)

*Onocnemis Virginiana* (382)

*Saponaria officinalis* (379)

*Asperula Hystris* (384)

*Morinda pithulora* (387)

Just beyond Hartford An. bridge we found *Morinda didyma* in a garden. On Belair Rd we found *Vaccinium corymbosum* var. in fruit. The *Lilium Canadense* that were found were so very red that we were not sure of their identification, they looked like *superbum*.

\* Found the French Mulberry in bloom. On this trip was pleased to find Rhamnus Frangula; it was in fruit.

733

July 8 A trip with K. to Towson\*, Lutherville and Mt. Washington. The heavy rains the past few days have caused considerable damage throughout this region. On Wednesday a severe storm passed over Timonium, the heavy down pour swelled the streams enormously, causing washouts, & inundating the fields. Many farmers suffered considerable loss. The rains on Thursday & Friday although not so severe added considerable to general ruin. Although the rains had been so generally destructive they on the other hand had been particularly favorable to the fungi as their great numbers and variety showed. Had I felt so inclined, I might have collected them for study but the depressing weather prevented any thought of this and it was only after I had gotten down in the meadows near Lutherville that I felt at all inclined to do any botanical work. Here one could see with what force the water swept off over the land! The tall grasses, sedges and plants were lying flat. In some places too, huge masses of cinders and ballast brought down from the railroad covered the ground. My trip here, besides for the purpose of seeing the effects of this destructive flood, was mainly to see if Spiraea lobata were in bloom. I soon found it, first of all in the Benton meadow, then at Parry's spring and finally also on the opposite side of the track. I collected several fine specimens. While collecting it observed that the root had the sweet odor of wintergreen. Collected also specimens of Lilium Canadense, Rhexia Virginica, Stachys palustris, and a single one of Melanthium Virginicum. This last was a nice find. I find that Pedicularis lanceolata is quite common in this region near L. We ate lunch near the spring and after dinner walked toward Mt. W. where we took the car for home.

#### Plants in bloom

Spiraea lobata. (388)

Rhexia Virginica (392)

Pycnanthemum linifolium (389)

Melanthium Virginicum (390)

Stachys palustris (391)

734

13 To Tolchester. What attracted my attention most of all was some Equisetum hiemale. I do not remember seeing it <sup>here</sup> before, although I always go over this same route.

yet here it was in several large patches, most of it beautifully fruited. To-day I walked along the beach as far as the outlet of the second lake. I secured some nice specimens of Stachys glabra.

Plants in bloom

Tromia radicans (393)

Stachys glabra (394)

735

July 14

With Mr. S. to Chair's woods. We made the trip mainly to find fleshy fungi, and very well did we succeed. The Boleti were particularly abundant and at least 10 different species were collected, they prove, however, very troublesome to determine. A number of Ammita were observed, the most conspicuous one and at the same time prettiest being A. solitaria. It is quite large, nearly white pileus covered with darker patches, some of which appearing much like raised projections. The veil is quite large and is attached quite near to the pileus. The volva is bulbous and is prolonged downward into the soil almost like a root-like projection. Lactarius was well represented and also Russula. One mushroom, of a yellowish or better brownish yellow color, with pileus quite sticky was observed quite frequently. It had the odor of apples. I failed to determine it.

Plants in bloom

Sandysia puberula (395)

Anagallis arvensis (396)

736

15

Along B. & O. tracks to Back Shores.

Plants in bloom

Clethra alnifolia (397)

Sisymbrium altissimum (398)

737

20

A trip to Sparrow's Point with R. The little woods <sup>on</sup> around the point is quite interesting. I learned with much pleasure that the company is guarding it most zealously and do not allow anyone to cut or mutilate any of the trees or shrubs. I was surprised to find here a considerable number of Beech trees; one large one, recently cut down, is the largest tree I have seen of this species. I collected a number of Hepatica also some Weberia sessilis.

July 20  
(continued)

## Plants in bloom.

*Boehmeria cylindrica* (406)*Minularia alata* (403)*Ruellia strepera* (399)*Aeschynia incarnata* var. *pulchra* (407)*Lactuca integrifolia* (400)*Polygonum aviculare* (402)*Strophostyles angulosa* (411)*Polygonum aviculare* (414)*Elymus virginica* (410)*Agrimonia eupatoria* (401)*Chenopodium Botrys* (412)*Lippia lanceolata* (413)*Verbena urticifolia* (408)" *hastata* (409)*Hydrocotyle verticillata* (404)*Desmodium nudicaule* (405)

738

24

Trip to Hollywood Park. All along the car tracks, between them and between them and the road, for a distance of more than half a mile to the bridge may be found *Nasturtium sylvaticum*.

Visited the *Aralia spinosa* plantation and secured specimens of leaves. The plants are not yet blooming but will be within a week. In the woods at this point may be found many plants of *Gaylussacia frondosa*. At Hollywood I got a specimen of *Nasturtium palmatum*.

739

27.

A trip with G. and K. We met at the Wilkins Av. terrace about 1/2 past seven A.M., and proceeded at once towards the tracks of the P. R. R. On right side of the road I found quite a number of plants of both *Apocynum cannabinum* and *Androsæmifolium*. I secured several specimens for my press.

Arrived at the railroad, we proceeded out the road to Arbutus, we then went out the Sulphur Sp. Rd. Arrived at the old hotel, we examined the now almost demolished structure and being decided to take a picture or two of it. Near the old building I found a fine lot of *Melissa officinalis*, also plenty of *Hedeoma*, *Scum album* and *Brickellia vulgaris*. I secured specimens of some of these. After putting the plants into press and after G. had taken the pictures we proceeded to Cannon Rd and then to Avalon. Here we crossed the river and then followed the River Rd. to Orange Grove. On the road secured some fine specimens of *Phrynos leptostachya*, *Minularia alata*, *M. virginica*, *Cryptotaenia*. We stopped at a pretty spot to eat our lunch. Here I put my plants in the press and here I found a fine lot of *Anthosaurus*. After dinner we proceeded to O. G. Here we had a good look at the

remains of the old mill. We then proceeded to the ravine and made our way slowly up the brook to the spring. Just at the entrance of the ravine I found a fine lot of that mycological puzzle Bantheclla ciliaria (?) or was it leptocella Bantheclla. I think it was the latter, for there were scarcely any folds on under surface of some of the specimens and the plants were very much lobed. Close to the spring I found Uebria coccinea.

After drinking some of the fine water, we proceeded up the hill towards the open field and finally the car station. On the way found Uebria in great abundance.

Plants in bloom

Meliss officinalis (415)  
Solanum nigrum (416)  
Epilobium angustifolium (417)  
Aralia spinosa (427)  
Ludwigia alternifolia (418)  
Mimulus alatus  
 " ringens (419)

Chobelia inflata (420)  
Cuphea micocissina (421)  
Potentilla Norvegica (423)  
Aralia racemosa (424)  
Pentstemon redoides (425)  
Monotropa hypopitys (426)  
Angelica hirsuta (422)

740

29. With Mr. W. to the woods near St. Agni Hospital. Mr. W. is interested in the Lepidoptera and we hoped to have a fine afternoon together.

It was nearly 2 P.M. when we left Mr. W.'s home and I suppose it was half an hour later when we turned out of Kate Av. just a short distance beyond the Hospital into the woods.

Mr. W. was particularly anxious to know the names of various shrubs upon which the larvae of various species of butterflies fed. We were thus, proceeding, when I observed a fine specimen of Habenaria ciliaris and close by another, both of which I secured. Here, too, I secured some fine specimens of both Polygala Nuttallii and P. Curtissii, also some of P. ambigua. Both of the former have persistent bracts. The heads of Nuttallii are inclined to be cylindrical, whereas those of Curtissii are more round; the flowers of the latter are purple and showy whereas those of Nuttallii are greenish and less conspicuous.

July 29  
(continued)

The <sup>seed</sup> fruit of *Nuttallii* is very hairy whereas that of *Curtisii* is much less so. The caruncles of both are small, possibly about  $\frac{1}{4}$  size of the seed. The seed of *Curtisii* are apiculate.

We had just found another locality for the *Habenaria ciliaris* when we observed the approach of a distant storm. Thinking that it might possibly not be so severe we decided to continue our trip. But before long the storm was upon us. First a little one, but directly upon it a second, very severe. The rain came in torrents and before long we were quite wet notwithstanding our umbrellas. There was some large hail with it, too.

This put a stop to all botanizing as well as all insect collecting. We waited until the storm was over and then picked our way out. This was not such an easy matter for there was wide streams of water everywhere, we, however, managed to get out without any serious mishaps. On the way we found the caterpillar of the bucket worm. This creature lives in the bucket it has made and carries it about with it from leaf to leaf as it seeks its food. Mr. W. said that the caterpillar lives its entire life in this sack, pupates and transforms into the perfect insect. The males being winged fly to the females which are not, fertilize them. The females after fertilized deposit their eggs in the bags and disintegrate.

While in the woods we found *Aristolochia Serpentina* in abundance, some in fruit. On it we found the black caterpillar, a certain species of butterfly.

When once again on the road we soon managed to get to the cars and before long were speeding homeward.

As we passed the dam near the bridge a beautiful sight met our gaze. Here where there is generally a slow moving innocent looking brook, we now a raging torrent. The water rushed over the dam in great volume rivaling in beauty Niagara. Below it spread over its broad flood plain.

#### Plants in bloom

*Habenaria ciliaris* (428)

*Polygala ambigua* (429)

" *Curtisii* (430)

#### *Viola pedata*

*Polygala Nuttallii* (431)

*Lilium superbum* (432)

<sup>741</sup>  
 Aug. 1 With H. and E. to Ocean City. We enjoyed the trip very much. While there, I did a little botanizing. I was pleased to secure a number of specimens not found here. My most important find being Hydrocotyle Asiatica which I found quite a large colony.  
Plants found in bloom

*Hydrocotyle umbellata* (445)

" *Asiatica* (446)

*Juncus scirpoides* (437)

*Erigeron Canadensis* (438)

*Cakile Americana* (447)

*Hibiscus Mouchoutii* (439)

*Sabbatia stellaria* (442)

" *chloroides* (443)

*Oenothera biennis* (433)

" *fruticosa* var. *biennis* (434)

*Elodea canadensis* (444)

*Lunium medium* (435)

*Fimbristylis caroliniana* (436)

*Kosteletzkia Virginica* (440)

*Pontederia cordata* (441)

742

4 A short trip with Mr. W. to Mt Washington and vicinity. We left home about 8 A. M. Arrived at Mt. W. we walked along the run. Up to Pikeville Junction we found it best to keep on the railroad, but here we decided to follow the stream itself. Just a little way beyond Mt. W. I secured some fine specimens of Clematis Virginiana. It was where the old ruins stand that we descended to the brook. We found the scenery here most interesting and our walk here quite a treat. Some pretty Myxoxetes were obtained from a decaying log. While walking along we presently heard the voices of children and looking ahead we saw several little girls. When we came up to them near a pretty pool, the oldest told us that they were going in swimming. Some distance up where the stream makes an abrupt bend I found a liliaceous plant gone to fruit. We here came to a rather open place, but here I found some nice specimens of Polygala verticillata. We found a nice place under a tree and ate our lunch then proceeded onward to the car tracks but left them again where the new cottages were built and again followed the stream. When we again came to the tracks, we were at that

Aug. 4  
(continued)

pretty meadow. Here grew Verbena harts in the greatest profusion, also some specimens of Lobelia cardinalis, Minicula, Veronica Virginica, V. urticarfolia, etc etc. We went under the bridge and examined the meadow on the other side of the tracks. Here I was glad to find Ludwigia palustris also. plenty of Achillea Plantago. We kept in the meadow as long as we could, but were finally obliged to take to the road. Here we found Sabbatia angularis in the greatest profusion. No doubt the wet weather has been most favorable for it. The road brought us to Park Heights Av. We then went back to where the Electric Park Car crossed it and there took the car for home. The weather was very warm.

Plants in bloom

Polygonum Pennsylvanicum (448)

" acre (449)

Euphorbia maculata (450)

" Purshii (451)

Polygala verticillata (455)

Portulaca oleracea (456)

Veronica Virginica (460)

Hydrocotyle Americana (454)

Ludwigia palustris (461)

Sabbatia angularis (462)

Carex nictitans (453)

Clematis Virginica (452)

Achillea Plantago (459)

Phlox maculata (458)

Lobelia cardinalis (457)

Polygonum sagittatum (463)

5 Trip to Washington. No botanizing.

11 Race at Spring Gardens (also on 12<sup>th</sup>)

12 Chester River Trip

743 14 An afternoon trip with E. & K. along Spring Gardens. We walked along the shore and returned by road. Found along the car tracks where they cross the marsh at head of Spring Gardens (now being filled up) plants of Euphorbia the "Snow on the Mt.", also some of Humulus Japonicus.

744 15 A trip with B. E. & K. up Stony Creek on the Petrel. We got off at the head of the creek and then walked to Waterford. We then visited the "old hut" as B. wanted a picture of it. Here we found excellent apples. <sup>Behind the</sup> house one ~~walked~~ walks down a hill into a wooded ravine. Here I found a beautiful spot for plant life. A fallen tree trunk was beautifully covered with Begonia triloba.

Here it was prettier than I have ever seen it before. Here too I found Georgie pellucida. Other liverworts no doubt were also here, but I had not the time to investigate. On the ground I found beautifully printed specimens of Lycopodium lucidulum. From the old mill we proceeded to Mayoths bridge and then back to the boat wharf.

- 745 17 A beautiful day; the prettiest this summer. What a delightful change, after our disagreeable sticky days. I took the trip alone. I enjoyed the trip so very much that I was 6 hours in getting through the ravine. I visited the swamp at Fox Run thinking that possibly Pedicularis lanceolata would be blooming but it was not. I returned home by way of Wilton Av.

- 746 19 Another pretty day. Went with K. to Curtis Bay. We got off where the car turns into Curtis Bay, and proceeded out the road to Wagner's Pt. After looking about here we started for Curtis Bay, by walking along the shore. We had little trouble doing this except at one place, here we had to go back to the road. After crossing the bridge across Stonehouse cove we ate our lunch and then proceeded to Curtis Bay by following the tracks a short distance and then again the shore. Arrived at the coal pier we watched several vessels being filled with coal. As K. was anxious to get aboard an ocean vessel, I made inquiry and finally boarded the "King Robert" an Eng. vessel hailing from Glasgow. We found the boat a fine one built entirely of iron. She sailed that same day for Cavite, Philippine Islands. We reached the terminus of the electric car about 3.30 P.M. and here we awaited, L. A. C. & M. K. now joined them and I started homeward.

- 747 23 Started to-day, aboard the Delight for Budden Creek. We left the boat-house about 10 A.M. For

- Aug. 23. a time we sailed fairly well but when we got between Hawkins  
 J. (continued) and Stony Run we were becalmed and remained there over night
- 24 The next day we drifted about for quite a while. But towards  
 11 o'clock the wind began to blow and soon we were sailing at  
 a lively gait. We reached our destination about 1.30 P.M.  
 As soon as we cast anchor we ate lunch, and then I landed  
 I examined the shore for some distance. An interesting  
 spot was the point where the old light house is still to  
 be found. It is built entirely of stone. I secured several  
 fine specimens of plants on my trip. It was about five when  
 I returned to the boat, an hour later we were on our way  
 homeward. Returned home at 3 A.M. Friday 25<sup>th</sup>.  
 On the shore, I found a species of Crepis. It may prove to be  
C. biennis, if so it differs from the type in being perfectly smooth  
 and having seeds 13 ribbed, the ribs being minutely roughened.  
 In an abandoned field, overgrown with various weeds, I found  
 a plant quite new to me it proved to be Polygonum  
procumbens. It looked very much as if it would prove  
 to be a species of Houstonia, and yet its apparently swollen  
 nodes suggested a new relation of Caryophyllaceae. I observe  
 that Loganiaceae differs from Rubiaceae mainly in two particulars  
 in having a free ovary and having stipules. Might not the relation-  
 ship be very close? Right on the shore where I landed, I found  
 a species of Juncus, I make it Juncus.
- 748 26 To Furnace Branch for Fox grapes. The day is again an ideal  
 one delightfully cool and pleasant; the heavy down pour of rain  
 yesterday cleaned the roads of dust and this with the pleasantness  
 of the weather made my trip a most enjoyable one. I left home  
 at 9 A.M., rode to Brooklyn and then walked. I arrived at  
 F.B. about 10.20 A.M. Remembering my experience of last year I  
 turned in at the spring and here again I secured a nice lot of  
 grapes. I found also a pretty Myxomycete on the decaying stump  
 above the spring, and here too a liverwort. On one of the trees  
 near by I found another liverwort. It was about an hour later  
 when I was ready to move onward; before doing so, however,

I ate my lunch. I now followed the branch, this time, however, did not secure any more grapes until I came to the Old Furnace. Here, again were a fine lot of them, unfortunately, however most of them high up in the tree tops, nevertheless I secured enough to fill my vacuum. I decided now to go to Marley and return home by way of the new bridges. On the Marley Road I secured grapes at two places, near the spring and near the Watford Rd.

Plants found in bloom

*Cuscuta compacta*. (464)

*Solidago arguta* (471)

*Eupatorium perfoliatum* (472)

" *rotundifolium* (473)

" *pauciflorum* (474)

*Solanum nigrum* (475)

*Asclepias verticillata* (465)

*Crepis* (466)

*Fraxinifolia autumnalis* (467)

*Spiranthes gracilis* (468)

*Juncus* (469)

*Polygonum procumbens* (470)

749

28

With George to Tolchester. We went on the morning boat. Arrived at T. we took a trip into the country. According to my map Sandy Bottom should prove an interesting region, so we decided to go there. All we had to do was to go out the main road. We found our trip quite interesting, although nothing particularly new in the plant line was observed. We observed that white-washed houses was "the style" in this part of Kent Co., at least. At one place we passed an orchard of peach trees with a moderate quantity of peaches. We reached S. B. a little before noon. In appearance it does not differ much from other country villages, with the exception only of its church yard. From its appearance one would suppose that this community must be unusually flourishing. I know of no other country church yard kept in better condition. Just outside of the churchyard is the "village green" where picnics are held under a beautiful wide-spreading old oak\*. From it, one gets a fine view of the mill-pond and the mill, now unfortunately modernized. It no longer has its old wheel, but a hidden turbine

Aug. 28  
(continued)

and is no longer dependent upon its supply of water, for a small gasoline engine has been installed. The view around the pond is quite pretty and I wished very much that we had enough time to explore it. However, L. was anxious to get back to T. in order to take a few pictures, so we satisfied ourselves with just a peep at the mill and then began our return. We took another look at the church-yard and then trudged bravely onward for T. was about 5 miles distant. We stopped but twice. Once to take a picture of the village smithy, a very modest affair, and then at the well where we got a drink. To get the water we had to lower a bucket. This was something new to us and we enjoyed the experience. The well was about 30 ft. deep. We reach T. about 3.30 P.M., walked through the grounds and then went to the beach where we awaited the arrival of the steamer on its afternoon trip. George wished to get a picture of <sup>her</sup> just as she was approaching her landing. After getting this picture we walked along the beach to the lake; we were anxious to get a picture of it. But in this we failed, although we attempted to get around it. We found, however, a pretty hut in the woods and L. took a picture of it. It was about 6.15 P.M. when we decided to get aboard the boat and secure a comfortable place for our homeward trip. From the boat we had a beautiful view of the sun set. It was 7 P.M. when we left T. and by 8.50 we were back home in Baltimore.

#### Plants in bloom

*Lobelia puberula* 476

*Cyperus bacculatus* 477

" *ovularis* 478

*Polygala Mannii* 479

*Lobelia cardinalis* 480

750  
Sept. 5

A trip with N. and the children to St. Michaels on the Miller River. We left the city about 9 A.M. in St. Annapolis and after a most enjoyable trip arrived at St. M. at 1.45 P.M. Passengers were allowed to land and given two hours to see the town. Thinking that

a trip as far as the railroad and then along the railroad to the creek would be profitable, I hastened in that direction. My trip proved better than I had hoped and secured some interesting specimens. On the wharf I found *Actis enbulatus* in quantity. Nothing interesting was found along the roadside but along the railroad I found *Vigna catang* the Cow Pea, and at the creek *Statice Limonium* in quantity. Here too, I found *Atriplex hastata*.

I now returned to the boat and investigated the shore near the landing. Here I found *Salicornia herbacea*, plenty of the *Sea Lettuce* and plenty of *Statice*. At half past three I boarded the boat. Our trip home was also very pleasant.

Plants in bloom

*Statice Limonium* etc (481)

*Cyperus strigosus* (487)

*Baccharis halimifolia* (488)

*Actis enbulatus* (482)

*Arctida* (483)

*Atriplex hastata* (484)

*Pluchea camphorata* (485)

*Salicornia herbacea* (489)

*Vigna catang* (486)

*Decasmodium striatum* (490)

- 7 With U. <sup>brock</sup> & K. to former place and then along stream to Miller Rd and back to Bonamtown. Found nothing particularly interesting on U's place. Along the run secured several nice specimens of *Lobelia sylvatica*, also of *Cyperus strigosus* and *C. vanderi*. We started homeward at 12 M. and as I have wished for several days to see the lake at Canton I started in that direction.

Plants in bloom.

*Rudbeckia laciniata* (491)

" *fulgida* (492)

*Inula thelemium* (501)

*Amaranthus blitoides* (493)

*Mentha rotundifolia* (500)

*Acalypha Virginica* (494)

*Cynodon Dactylon* (495)

*Dactylis maritima* (502)

*Heliotropium Europaeum* (506)

*Mercurialis annua*. (505)

*Petunia paniculata* (504)

*Atriplex roseum*. (497)

*Panicum Anagalli* (496)

*Urtica urens* (499)

*Elaeagnus Indica* (503)

*Panicum amaran* (498)

*Eclipta annua* (507)

Sept. 9. To Towson, across the country to Providence and then to Rush Branch and the Gunpowder; home by way of Peteron Br. Glen Ellen and Dulany Valley Pike. It was about 10.15 A. M. when I left P. with <sup>about</sup> We walked along quite leisurely, keeping in the woods as much as possible and going <sup>about</sup> parallel with Providence Rd. When quite close to the road we came upon a copperhead snake. It was not a very large snake and pitifully colored, no doubt it had only recently shed its skin. I had no intention killing it and persuaded my companions from attacking it. When it became aware of our close proximity, it made a hissing noise and glided away from us as rapidly as possible. I kept a sharp look-out for lichen and liverworts, but nothing particularly interesting was observed, the only specimens that I secured being Tridie, Solidago rigida, Asplenium cheum and Polygale Marica. The Tridie cupra was interesting because it showed that the grass besides being perennial had an interesting way of multiplying by sending out little runners, very thread-like, at the end of which it produced a little corn. When we reached the fair we got into the road and followed it to a point some distance beyond P. We ate our lunch before reaching P. P. we found quite an interesting little village. Here too, we found the picnic grounds close to the church yard. A short distance beyond P. we came to a small orchard and here we had a pretty view of the ravine to the Gunpowder also of the gorge of the latter in the distance. We now left the road and descended into the ravine. The stream was soon found. Our trip along it was quite a pleasant one and a most enjoyable treat. I believe it the prettiest ravine I have been through. At some places the descent is quite steep and one almost thinks it impossible to go farther, however a foot hold is always found and new beauties continually unfold themselves to our eyes. When possibly one half of the distance through the ravine had been made I made a most interesting find, quite a fine one too, in Actaea alba now with its cluster of pretty white berries. On the big overhanging rock I found Mitella conjugata. By 2.30 P. M. we had descended to the Gunpowder. I now found that I was

only a short distance beyond the water trough, so walked back to it and ascended the slope to the spring, seeing several liverworts. We then returned to the Sun-pond~~ed~~ and proceeded to Peter's Run and returned to P. by way of Eden Ellen.

Plants in bloom

*Nepeta Cataria* (510)

*Solidago rigida* (508)

*Gentiana Andrewis* (509)

*Perilla ovynoides* (511)

*Nahala alba* (512)

753

12

With George from Gwynn Oak station out Liberty Rd to the falls then along the falls towards Pikeville.

Owing to the rain yesterday the roads were quite wet and so too many places in the woods. We enjoyed our trip very much. Geo. found many places of which he took a picture. I secured several pretty Lichens and a pretty fungus. Monotropa uniflora was found of a

Plants in bloom

[beautiful red color.]

*Sida spinosa* (513)

*Panicum capillare* (515)

*Potamogeton natans* (514)

*Eupatorium ageratoides* (517)

*Eupatorium perfoliatum* (516)

" *purpureum* (518)

*Humulus Lupulus* (516)

*Laportia Canadensis* (518)

*Gerardia tenuifolia* (519)

*Chelone glabra* (520)

754

15

First tramp with my botany class. We met at Dickeyville car terminus. It was about 10 min. of 5 when we started on our trip. We passed through D. and took the route to Gwynn Oak Station. A beautiful specimen of Gentiana ochroleuca was found, also beautiful Coral fungus, an Amanita and a dark orange brown Lactarius. A nice specimen of Lichen was gotten from a rock when almost through the woods.

Plants in bloom

*Gentiana ochroleuca* (521)

*Aster linariifolius*. (523)

*Solidago carnea* (522)

*Thysopis Mariana* (524)

755

16

A trip to the ravine. I left home about 8 A.M. so reached Hilton Ar. about 9 o'clock. I proceeded down Hilton Ar. to the path to Fox Run. On way down, I collected some fine

\* Near the spring I found Scapanus nemorosus in quantity. Nearly all the plants had gemmae.

Sept. 16  
(continued)

specimens of Desmodium frutes. My trip to Fox Run was to visit the little swamp to see if Pedicularis lanceolata was in flower. This time I found it in full fruit. After securing specimens, I proceeded through the ravine, then along the river to Relay and then home by way of the B & O.

Plants in bloom

Pedicularis lanceolata (525)

Solidago latifolia (526)

756 18 Along Guyaner Falls from Windor Mills Rd to Guyaner Oak Park then to B. O. station where I took the car for Westport. Returned home by 5 P. M.

My trip along the falls was very interesting. While collecting flowers of the Matrimony Vine, I was accosted by my old acquaintance of Dickeyville - the one who pruned the spring near the village and who told me about Conquer John. To-day, he told me, he would show me the plant as there was some of it growing near the spring. While on the way to the spring he told me again the story of the "epiphora", he told me too, of a little vine, a small bit of which will "make you sweat". He intends showing me this plant sometime. He told me that "Conquer John" when it first begins to bloom has white flowers but later, they turn blue, it is when they are blue that the root should be collected. It is the best remedy for female complaints. He said it was the last flower to come into bloom so he was told. He had been told its name but he had forgotten it, still he remembered, or at any rate thought that it belonged to the Gentian family. We were now close to the spring and sure enough here was the plant. How surprised I was, it was Chelone glabra. "You are", he said, "the flowers are now white but they become dark blue and the flowers become rounder". He was sure the flowers were getting purple already. "See, here is one getting blue". I am sure his "Conquer John" must be "Gentiana Andreinii", the two plants no doubt look alike to the uninitiated.

He told me, too, that horsemint was an excellent remedy for bruise on horses. Make a poultice and apply.

Nothing particularly interesting was found until I came to a little brook, here I found Porella pinnata in quantity. Here,

too, I secured some fine leaves of Simula hispida. I secured some fine lichens and a liverwort from a moist rock.

Arrived at Sugar Oak I crossed the falls and proceeded to the Chase place. Unfortunately no Chase was to be found.

In the brook, however, I found a nice lot of Cladophora.

The following observations are worth noting. An algae probably Vaucheria near Sugar Oak Ar. at the springy ground. A nice white oak on road to the Chase

place loaded with fruit on low branches. A pin oak

at Sugar Oak Station. Oenothera biennis at bridge across Winsor Mills Rd. plenty of it along Bt O. R. R.

off. gas works.

#### Plants in bloom

757

23

A trip to Fresh Pond, a beautiful sheet of water not far from Badkin Creek, in fact, the course of one of its tributaries. I left home about 6 A. M. in time to leave on Star Petrel at 6.30. which to-day made a trip up Rock Creek. It was about 8.45 A. M. when we reached the head of the creek. I then proceeded to the Mt Rd, fortunately getting a ride part of the way. There was no trouble finding the lake, as a view of it can be had from the road. It must have been about 10 o'clock when I reached the pond. The scenery here was indeed beautiful. The pond is enclosed by beautifully wooded hills. As soon as I reached the pond I descended to its shore. Here I found the Cranberry in profusion, also Carex, and the Pitcher Plant. A trip here in the latter part of June will no doubt be quite interesting. To-day, I was particularly interested in lichens and collected quite a number of them, some on the ground, some on trees and a few on rock. I proceeded around the pond to its mouth then followed the path back to the road. Quite a number of lichens were gotten near the mouth of the pond off of several trees. On trip homeward I collected lichens at several places. I took the route to Curtis Bay. Found Odontochloa with gemmae.

- <sup>758.</sup>  
Sept. 24 To Back Shores for plant material. I found *Spargyria* in a pond near the railroad bridge and *Hydrodictyon* in abundance immediately back of W's.  
Afternoon, I went to D.H. Park.
759. 26 To Turkey Pt on Middle River. The trip was undertaken to find Chama. I had little trouble finding my way to the point and after eating my lunch went to the inlet where last year I found the China. For some time I looked for it in vain, but after a bit found some. It is no longer in the fine condition as found in the early part of August. The printed specimens have no doubt gone to pieces.  
On my way home collected Maple specimens. On moist roadside found a thalloid liverwort.
- 760 29 With Botany Class from Bonnie Bree to Wenden Hills
- 761 30 With Bibbins, Koch, etc on Mr Huber's launch to Bodkin Creek  
Our trip was undertaken to make a path to the buried forest on the bay shore. It was 8.30 A.M. when we left Fort McKenny and at 10.30 we were in Bodkin. A path from the old wharf was followed to the old now deserted homestead. We then followed the path going in the direction of the Mezothly till we came to the woods, then along the edge of the woods to the bluff overlooking the bay. The buried forest is only a short distance down from the edge of the woods and it now became necessary to cut a path through the thickly overgrown woods, not only to the buried forest but on to the old inlet where one finds a path leading back to the road. At this old inlet, it is quite easy to get to the shore and to the buried forest. We had the path cut about noon and then K & I returned to the launch for the bunches. When we returned a fire was built and coffee cooked and we ate our dinner. After dinner, the road along the pond was cleared and we returned to the launch. It was about 6 P.M. when we returned home.
- <sup>762</sup>  
Oct. 1. Repeated the trip of Sept. 29, this time to get specimens of Wild Carrot and Edm. Wild Carrot is found in abundance near Bonnie Bree.

3. To the ravine. I took the route down Wilton Av. to path leading to open field, then along Camp Run. I kept a sharp lookout for lichens and secured several. I found Apleticum brunale already showing itself. I was surprised to find a grape in bud; if the weather remains favorable for a little while, it no doubt will bloom. After going through the ravine, I proceeded to O. G. crossed the river, and walked along the River Rd. G. Near the entrance of the ravine, I found the great tree trunk covered with Polyporus sulphureus. I visited Gentian Place and found 60 plants in bloom. Returned home by way of B & O.

763

6. With Botany Class to Herring Run. A nice little discovery was made at the pond; here I found a dark green chara or is it Nitella?

764.

7. With the Botany Section of the Academy of Science to Lutherville. The morning was perfect, bright and just cool enough to make walking pleasant. Although 9 A.M. was the appointed time, it was about a quarter to 10 before we started. We took the route generally taken on this occasion, out York Road to the woods and then through the woods. Our trip through the woods was quite a treat, and we stopped frequently to examine the lichens, the fungi and <sup>a</sup> ~~the~~ <sup>many</sup> great <sup>rather</sup> number (of) ~~various~~ things of botanical interest. What one particularly large fine Hydnium was observed. I took it up and put it aside carefully to take with me on our homeward trip.

I suppose it took up about an hour and a quarter to reach L. Arrived at L., we made inquiry regarding the train and then set out at once for the meadows. The gentians were not as plentiful as last year, but still sufficiently so to give us all much pleasure.

It was nearly 12 when we reached the spring, so we got out our lunches, and for the next half hour enjoyed ourselves chatting and eating. It was half past 12 when 3 of the party decided to return to the station and start homeward, and an hour later when two of the remaining members did likewise.

Oct  
(continued) 7

The rest of us proceeded to the gentian spot up the road. Here we found the ground had been ploughed and instead of gentians, cow-peas were growing beautifully. We walked up the road a short distance, collected a few asters, Pedicularis lanceolata, which seems to be increasing in numbers, and a few other things, and then returned slowly over the same route. I looked again for Polygala crinita but did not find any of it.

After a short stop at the spring we returned to L. and started back to T. On our way back I collected the leaves of the chestnut, etc. that I needed for the school, also a nice lot of the lichen found in such fine condition during the morning, that large Hydnium and a nice lot of Riccia.

It was nearly 6 P.M. when we reached T. and an hour later before I arrived home.

765

10 To the Caves. I visited this region in the hope of finding gentiana crinita in this lime stone region. Not a specimen, however was found. I went my usual route. Near the pond I found a fine black walnut tree with immense fruits, fully  $2\frac{1}{2}$  times the size of most of these fruits; 45 of them filled the little flour bag. Along the corduroy road, I found a lot of fine chestnuts. The wind was blowing down the river. and had I had more time I could have secured a great many more, even as it was, I brought home over a quart of them. On this trip to-day, I hoped also to get some of that pretty lichen observed on one of my former trips, but I was doomed to disappointment. I found, however, quite a pretty one growing on the Kalmia. Also, on the rock near the dam, I found two more specimens. After walking through the ravine, I proceeded to Pikesville, where I took the car home. Found Witchhazel in bloom to day for the first time. Found two a farciated stalk of Cypripedium virginicum.

766

14 To Washington

767

15 Bonnie Bee to Windsor Heights. Observed to-day that Polygonum sagittatum was attacked by a rust. What seems strange, however, is that although both sagittatum and arifolium were

growing together in close proximity, sagittatum alone was affected. Searched carefully for Viburnum dentatum but failed to find any.

- 768 17 From Towson to Glen Ellen, then to Meredith bridge and return. I examined the trees on the way through Ridgeley particularly the Maples. I secured some nice keys from the Sycamore maple and a few from the Norway maple. I found a nice Walnut tree with large walnuts just beyond the barn. Near Glen Ellen found some fine Viburnum dentatum. The orphans are still at the old house, they are awaiting the completion of their new home. Just beyond the old house in the woods I found quite a nice lot of chestnuts. I secured 3 qts. of them.

My best find was made when I was approaching Meredith bridge, when I found a large colony of the Purple Bentham <sup>on</sup> the left <sup>side</sup> of the road.

- 769 20 Along Gwynn's Falls from Edmondson Av. to Baltimore St. I was very much surprised to find Paulownia in bloom. In each panicle there was generally but one bud expanded. Does this occur generally or was this an exception? I saw but this one tree. It had very little fruit, could this possibly have been the reason?

- 770 21 With Percy to Brooklyn

- 771 22 With H. and the boys from Gwynn Oak Station to Dickeyville. Found <sup>the rocks</sup> the brook covered plentifully with that peculiar lichen. Found a specimen of Hepatica triloba in flower.

- 772 24 To Hamilton and vicinity. In morning visited Riverside Park; it was, therefore after 11 o'clock before I arrived at H. Proceeded at once out the old Harford Rd to the road branching off to Taylor Av., then out this road to the run (Chickapi Run). My trip was made to see this run, and I was quite surprised at its size. I find that it is best to go down on the right side. Parts of the trip are indeed fine but upon the whole it does not equal the ravine, there are too many fields and their accompanying weeds. Several

Oct. 24  
(continued)

fine chestnut trees were passed, not only close to the stream but later <sup>also</sup> on my way to H. I proceeded only as far as the fruit road, then decided to go to H. Near this road were some fine Sycamores with plenty of fruit quite low on the branches. The best of these trees, however, <sup>was</sup> found on the road back to H. right where it crossed the stream and turns off to go to Hillier Rd. Near H. are many Acer Negundo trees, with plenty of fruit. Secured some chestnuts from trees near the run.

773 27 Last trip with Botany class. We met at the bridge crossing Gwynne Falls at Edmondson Av. As it was quarter to five when we got together, we were not able to go very far. Proceeded along west bank as far as the railroad and then returned.

774 28 I took a trip to-day to see Over-shot Run. Left home at 7.30 A.M. and arrived at Fawcett at 8.40. Proceeded out Dulaney Valley Pike. When some distance out the road I found lying in the road a loaded revolver. It was quite a heavy affair and no doubt very valuable. A heavy team must have run over it for the handle on one side was broken. I picked it up and took it along with me, but I felt too ill at ease to hold on to it, so hid it among the dry leaves later <sup>in the day</sup> after eating my lunch. The gypsies were no longer at the lime kiln hollow. In a large field beyond the hollow I found Plantago in abundance and secured some of the stalks, also seed-stalks of the dandelion. Not far from the hotel, but on the right side of the road I got some nice cones of White Pine. Here too were 2 trees of Acer Negundo with samaras. I now proceeded to the road going to Warren. I had not proceeded far out this latter road when I stopped to examine a Sugar berry on the left side of the road. It was right at the head of the road. The little tree was almost covered with lichens. I secured 3 different species. Not far from this tree, I planted my seedling Gaultheria and also my seedling Ailanthus. I now continued my trip. My next stop was to secure some lichen from the Juncus

at the top of the hill. I must not forget to mention the finding of Pellaea atropurpurea near the Sugar bury. In several places I could have secured Sycamore fruits. I ate my lunch on the knoll overlooking the river. Learned to-day that the little house at the spring is called the old still house. It was at one time a place where they made moon shine whiskey. The old house is over a hundred years old. Parts of the old place have long disappeared, their foundations alone being visible. After crossing the covered bridge I proceeded to the old mill and then to the Overshot Run. At the mill I learned that there was still an old mill with wheel at Phoenix. Overshot Run is well named; the stream flows over a solid ledge of rocks fully 20 ft. high into a large pool. I think it will make a fine picture. On each side of the stream one can see the former foundation of an old dam. I now started homeward making my way towards the Janettville Pike. Returned home by 7 P. M.

775

31

With P. A. Her through the ravine. We left home a little before 9 A. M. so were in the ravine about 10 A. M. The day was quite bright so we were able to see the ravine at its best. We took the route past the open field and then to Owl Spring. Towards noon, we found ourselves near Candle Camp, so here we ate our lunch. After dinner we continued our tramp. Near the entrance to the ravine we found a fine beech tree laden with fruit, which was easily gotten. We crossed the river at Orange Grove and proceeded along the River Road. At Anselm we recrossed the river and proceeded up the Cannon Rd to Sulphur Sp. Road. I secured some fine Tecoma Prostrata on the way up this road. We followed Sulphur Sp. Road to Washington Rd and here we stopped to see the Lygodium. We then continued our trip out Washington Rd to the car line where we took a car for home.

- 776  
Nov. 4 A trip to Forest Home and Watford with the Botany Sect. of the Academy of Sciences. The trip was taken mainly to see the *Hygadium palmatum* which is now to be observed at its best. We took the 8.40 A. M. train arriving at Marley at 9.30. The morning was beautiful and every body was in the best of spirits. We found the *Viola Atlantic<sup>(?)</sup>* quite conspicuous with its yellow leaves. The more I look at this violet, the more I am convinced that it must be a form of *V. palmata*. We soon arrived to the *Hygadium* place and we found them in most flourishing condition. After collecting several specimens we continued our tramp towards Elnaton. On the way collected several forms of *Cladonia*. It seems as if there are two forms of *C. rangifer* one being much coarser than the other. Several low-growing *Cladonia*, <sup>with small Apythine</sup> were also collected. Near a large fallen tree we found some fine specimens of *Calotoma*. When we arrived at the spring near Warfield's we decided to eat our lunch. It was, therefore about 1 P. M. before we reached Elnaton. From E. to Watford it took us an hour. Here we looked at the pond, the old mill, and the furnace. We then walked slowly back to the station where we awaited our train. At the station we met an old man an employee of the B & O. now drawing a pension; he had worked for the company 48 yrs and 2 months. We arrived home at 4.30 P. M.
- 777 7 To Brooklyn and vicinity. Before starting got some specimens <sup>of twigs</sup> of *Ailanthus glandulosa* at Kings to try to root them. The morning being beautiful and bright, I walked slowly across the bridge so found it was nearly 10 A. M. before I reached Brooklyn. Proceeded to my favorite ravine. Collected quite a lot of germinating acorns of *Quercus Prince*. These acorns germinate as soon as they fall. A stout tap-root is sent into the ground but there seems to be no development of the plumule. The latter, no doubt, does not take place until spring. Observed some of the acorns of a pretty shagbark. These I find are so colored because of fermentation of the thick fleshy

\* Marked a tree close my  
 \*\* This plant may be recognized by its forked close to ground (about 2 ft from it) and by having a piece of brown glass (top of beer bottle) placed close to trunk. also a small can

cotyledons. Kept a sharp lookout for liverworts and Viburnum, and found two of the latter worth collecting. Near the entrance of the ravine not far from the large chestnut oak with a decaying trunk, and on the hillside immediately above the surface of the brook I found specimen in fruit, and later another specimen near the path <sup>along the ravine</sup> not far from the inclined holly. Both specimens had red fruits. All along my route I found the shrubs densely covered with the papery of Typha. Secured some fine fruit of Viburnum coccineum. Skunk Cabbage is showing itself everywhere.

On my way home, I found a nice place\* near the ravine just outside of the mause area and here I planted my specimens of Ailanthus and also a few of Paper Mulberry (pinnate) secured in Brooklyn\*\*.

On my way to B. found some fine specimen of Morning Glory seeds.

778

9 With Mr. Allen to Clifton Park. I was pleased to find Styrax in fruit and learned that the Bladder-nut-like plant is Kobresia; it is to the east of Mansion House.

779

10 With Mr. Allen to Lock Raven. We met at T, a little past 9 A.M. We took the route via Cromwell Bridge Road. A fine Quercus atropurpurea in fruit attracted our attention just as we were leaving T. Along the Cromwell Bridge Rd. our attention was frequently directed towards the beautiful fract flowers (?). It did not take us long to observe that, in every case they were around the base of Cinde Mariana and we soon saw that where found, the bark of the plant was always and occasionally the wood was split. The appearance of the fract flower was generally the same a band of ice an inch or more in width issued from the split on opposite sides of the stem and formed a ribbon like band extending fully an inch and a half from the stem, then curved neatly upon itself and returned to stem at <sup>the</sup> point of exit. We thought it remarkable that no other plants showed the

November 11  
(continued)

phenomenon. Plants unaffected by the frost were still green. The trees all along the Cornwall Bridge Road were beautifully covered with Lichen and on many of trees I found also Frullania no doubt F. Ascegrayana. At one of the little ravines, I secured two Cladonia. As we walked quite slowly it was nearly noon by the time we reached Loch Raven. A short distance beyond the dam we found a pretty nook and here we rested & ate our lunch. After dinner we continued our trip onward. Mr. A. was greatly pleased with the beautiful scenery.

We found that the evergreens were almost limited to the following "White Pine", "Austrian Pine", "Hemlock", "Spruce", and "2 Needle Silver Pine". As we approached the Water-trough, we were very much surprised to find icicles still firm & solid and to find so much ice around the trough. This region gets very little sun as this no doubt accounts for it. Beyond the trough I secured several Cladonia & a Peltigera.

But the best find of the day was near the curve, where I found a beautiful patch of Lycopodium clavatum, almost covering the hillside. It was not in fruit.

At the Caulophyllum spot I found again Frullania, no doubt F. Ascegrayana on the rocks.

We turned towards Glen Ellen at the 3-arched bridge and made our way homeward by way of Hampton.

It was past 6 P.M. when we reached the pike, but the moon shone beautifully and we trudged joyfully onward. We reached Towns about 6.30 P.M. and an hour later I arrived home.

Secured to-day cones from various Conifers:— Hemlock, Larch, White Pine, Scotch Pine and the Silver-bell Pine.

Several pretty patches of Lycopodium complanatum were found.

A very interesting find, <sup>made by Mr. A.</sup> was a sprouting acorn with 3 embryos.

780 14 Another trip with Mr. A., this time to Glenburnie and vicinity. We took the 8.40 A.M. train so arrived at G. about 9.10 o'clock. During the night it became very cold so that this morning it was the coldest it has been this season. Ice was found in the gutter and also in shallow places on the river. When we arrived at G.

and started on our way to the pond, we found it so cold, the wind blowing sharply into our faces, that we found thought our outing would prove a failure. However after we entered the woods, we found it much pleasanter, and before long we found the temperature quite agreeable. We walked towards the branch by way of the old hut, on the way collecting *Cladonia*, Violet leaves, Partridge Berries, etc, etc. When we reached the hawk, we kept following it, but when we came to the swamp at the head of the pond we kept to higher ground. Just in the rear of H's we found a pretty marsh where we ate our lunch. Just before in the little swamp I found a pretty lichen *Cladonia verticillata*. It was a much larger form than the one I found some time ago at Catonsville. After dinner we proceeded to the pond, and here I made a pretty discovery, Mr. A. called my attention to a pretty blackberry. I am surprised that I have never before observed it. It proved to be *Rubus cuneifolius*. It is quite distinct, the leaves are wedge-shaped quite thick and whitish underneath. From the pond we went to the old furnace. On my way I found a pretty *Peltigera*. After visiting the old furnace we started Homeward arriving there a little before 6 o'clock. The tide being very low, lower than I have ever seen it, we could cross Tunder Creek without difficulty.

781

18 With Mr. A. to Cockeysville and vicinity. We met at P. about 9 A.M. and we walked to L. We walked slowly, examining the vegetation on our way, and so reached L. at about 10.15 o'clock. Learning at the station that the next train to C. would be at 11 o'clock and that the fare was only 11¢, 18¢ for the round-trip we decided to ride. As we had over half an hour to wait, we walked up to the Gentian meadow and secured some ripe capenles. A few flowers were still to be found. Our train came on time and in ten minutes we were at C. We set out at once for the marble quarries. This was something quite new to Mr. A. and he enjoyed seeing them very much.

Nov. 18  
continued,

We ~~note~~ followed Beaver Dam Run up stream. For some time we were in low meadows bordered occasionally by low hills. Near one of these we stopped to eat lunch. Here, too, we found an old ruin so beautifully situated that we both commented upon what a beautiful picture it would make. After dinner we continued our trip up the stream and soon came to where Baicman's Run joins it. Here we found several persimmon trees loaded down with good fruit. Here, too, was an abandoned quarry. On the way we passed another old ruin and along the stream we found in several places the Black Hawk Viburnum prunifolium of considerable size. When we reached B's Run we followed it, and before long we entered its pretty ravine. The ravine starts at the county road. From the beginning we found it most beautiful, the only thing that we found to grate harshly upon us, was the cutting down of so many of its finest chestnuts. We went up on the left bank and came down on its right bank. In several places we observed little pools but had no time to examine them closely. No doubt they are full of pond life. I found the trip a most enjoyable one and will visit it again in the spring time. Hepatica triloba, and Pyrola rotundifolia was very abundant. At 3 P. M. however, I decided it was time to return so crossed the stream and made the descent on that side. We soon came to a pretty patch of Lycopodium lucidulum. It was beautifully fruited and I secured some fine specimens. A short distance off we found also L. complanatum. Mr. A. showed me how he tries to spread such plants by pulling up a little of it and transplanting it a short distance away. Also, how in collecting he does not take the terminal shoot but the part a little distance back. This gives the shoot a chance to spread. I made also a pretty find on the hillside - an old decaying stump beautifully covered with Cladonia beautifully fruited. It certainly was pretty with the innumerable red disks. I collected also another Cladonia from a rock, on which it was growing. It looked to me

like C. rangiferina but upon closer examination, I believe it must be another species. We reached the road about 4 P.M. and set out for the station. Looking at the time-table, I observed that we had 15 minutes to reach a certain train so we started to walk quite rapidly. but we soon saw that we had entirely too far to go to take that train, and we would have to wait an hour longer for the next. We therefore, took our time <sup>and</sup> stopped to see marble cut into slabs. Just before reaching the station we came upon the train, so boarded it and after a wait of 15 min. started on the return. We reached L. about 5 min. before six. We did not attempt to find our way through the woods but set out directly for York Rd. We reached P. about 6.45 P.M., and home before 8 o'clock.

782

- 21 With Mr. A. to Back River Neck. We took the car to Back River then walked out the road to the path beyond Deep Creek. We followed this path through the woods and finally came to a farm house. We were then directed to the Deep Cr. Rd. On my way across the field I secured some lichen from a Juniper. We followed the road and finally came to the bridge. On the way observed that Populus grandidentata was quite common. At the bridge across Deep Cr. I observed a fine lot of Anacharis and Vallisneria in the shallow water. I think the latter was covered with Cody lophos. We crossed the bridge and proceeded to the path beyond the house. In front of each of the houses was a nice garden. In one grew beautiful willows; in another Asclepias and in one Yucca. Following the path we came to the River and here at one of the club houses we ate our lunch. In the woods to the right of the path we found a holly tree filled with berries. Here Mr. A. explained to me how and when to graft, and to bud. Grafting is done in early spring just before the buds begin to swell. Grafting wax is to be used to keep the graft in place. Budding can be done

Nov. 21  
(continued)

either in June or in August. If done in June, it should be done sometime between the 10<sup>th</sup> and 15<sup>th</sup>, and if in August any time after the 10<sup>th</sup> and up to about the 10<sup>th</sup> of Sept. Budding is preferably done in June. After dinner we returned to the Rd and proceeded onward to what we later learned was called the Walnut Grove Rd. Parts of this Road are beautiful. We finally reached Back River Neck Rd. We went down the Road a short distance but finally decided to return. This we did and entered the woods on our right. Seeing a pretty path we followed it and came to Norman Creek. We then returned to the road and examined some of the Mistletoe on the various Black Locusts. We then entered the woods again to our right and proceeded slowly parallel with road. In several places I found nice patches of Pyrola rotundifolia and here too we found that beautiful variety of Lycopodium complanatum var Chamaecyparissius (?) which Mr. A. called var. sabinaefolium. As it was now nearly 4 P.M. we decided to make our way to the cars. This we did reaching Hollywood about 5 P.M. and home about 6:15.

783

25

With Mr. Allen from Rolling Rd to Hollywood and back to Elliott City. We met about 9:15 A.M. It was cloudy and rather warm. On our way out the R. R. we observed that the Oriental Plane Platanus orientalis had been planted along the road side. Mr. A. tells me that the rose that I have admired so much is Rosa rugosa a Japanese intro variety. Nothing very interesting was observed until we got <sup>on</sup> the road leading towards the river. Here on the left side of the road we came to a large colony of Loxosteles filled with Witches Broom. Here, too, I secured some nice specimens of Clematis. When we came to the woods we took the right hand path. We followed it for some time when I saw a nice patch of fruited Cladonia on the ground among Cl. rangiferina. Two species were found in fruit. On the other side of the road another Cladonia, was found in fruit, which <sup>it</sup> looked to me as if it must be a variety of C. rangiferina. It grew in quite large patches in little damp spots. C. rangiferina was found too along with it in isolated patches. The rocks looked quite beautiful to-

\* Mr. A. found that *Collinsia* also had its bark split near the ground. It, too, no doubt has fruit-flowers.

229

day with their pretty patches of lichen. Our next find was at the brook where we found some Euromyces Americanus. I was surprised to find it here. I found also a log (decaying) covered with peculiar club-like fungous processes. Secured from a tree several pieces of bark covered with the peculiar cructate lichen found so frequently on Maples. Here, too I found some fine specimens of that lichen growing ~~in~~ stones in brooks. We walked along the brook crossing it just <sup>above</sup> the farm-house. Here we found Noria Bark in profusion, and on the rocks in the brook Ficoides and Pocillo pinnate. We now continued our trip and soon came to the pump-house. Here we ate our lunch. After dinner we went up the river. A few interesting fungi were found. One little black one appeared to be made up of annual layers. We were pleased to find a little Lycopodium complanatum in the mixed woods of pine and deciduous trees. Mr. A. said it was sure to be found in woods of chestnut & pine. When we came to the Hemlock we took several of the small trees to transplant. At Hollafields we crossed the river and then proceeded to E. C.

784

28

A trip to the ravine opposite Oella. Before starting on the trip I visited Riverside Park, here, I met a Mr. Foreman who told me some of his experiments in grafting. He has succeeded in grafting peach, cherry, and apple on one stock; also in grafting magnolia on wild plum, also the dogwood on wild plum. At the greenhouse I got a specimen of Lamarkia (?) gibba.

It was nearly 11 A.M. when I arrived in Ell'cott City. It was cloudy and threatening rain. To-day, I wished very much to explore the ravine opposite Oella. I had long wished to do so but have always neglected to do so. I found the ravine more beautiful than I had expected it to be. Parts of it are as pretty as any that I have seen. One interesting find was a species of cructate lichen.

Nov. 28  
(continued)

in fruit. It was quite abundant. I make it Leucidea entolencea. Several liverworts were found - Leymus, Scapania, Cnecophorus, Marchantia, Frullania, and a shallow form, most likely Pellia.

I secured also some fine fern prothalli. Towards one o'clock it began to rain, and as I observed that it was likely to rain the rest of the day, I decided to make my way homeward, as soon as I came to the road. I decided to follow it into the town where I took the car for home. With hazel is still in bloom.

785. 30

Thanksgiving Day. With George to Overholt Run. A cold blustering day. Our long spell of dry weather came to a close <sup>day before</sup> yesterday. After a down-pour of nearly 24 hrs. it cleared cold but blustering. We each left home about 7 A. M. and there it happened that we got into same car and arrived at D. about 8.15. We set out at once for Mendith Bridge. Before arriving at the bridge we turned to the left and proceeded out Merryman Road. When near the river, I secured some printed specimens of Peltigera. We soon arrived at the Still house and G. took a picture of it. We then continued our trip. When only a short distance from the trap bridge we stopped to eat lunch. After dinner we continued our trip to the run and G. took a picture of it. We then proceeded to the river and walked along its bank, here G. secured two fine views. Limestone cliffs extending right up from the water's edge. The lichens upon these rocks were very interesting, one Umbilicaria was secured in quantity notwithstanding its brittleness, but the other <sup>one</sup> of the Leucideae with beautiful yellowish disks although in great profusion, I was not able to secure any. One of the boulders was prettily covered with Pellaea and Asplenium Trichomanes. Along the river several Hickory with thin-skinned pericarps were observed; and along the road we found some fine specimens of Celastrus scandens. It was a little past two when we started homeward. Arrived at the bridge we secured several small plants of the Hemlock for transplanting. For our homeward route we decided to take the Patle Spring Rd. this brought us to the Fall-gate. Here G. took a picture and then we hastened to D. where we took a car for home.

786

Dec. 2 A trip with Walter to Swan Creek. Cloudy and disagreeable with drizzling rain. We left home about half past eight A. M. Nothing particularly interesting was found until we passed the school-house. In the woods beyond the old house we found Lycopodium complanatum <sup>var. chancei</sup> quite frequently but there never was much of it. Here, too, under the pine needles were mushrooms. We reached the creek about noon - a thin coating of ice was observed covering most of the water. Nothing particularly interesting was found in the higher line except on the trees in the orchards. A beautifully printed specimen of Physcia was there obtained. The only other find worth noting was a specimen of lucimont at the old spring and one on the stump of a tree near the pond. Near the old spring I found two nice patches of Tipularia. Started homeward about 2 o'clock; on way secured specimen of Celastrus scandens and capsule of Morning Glory.

787.

5 To Cockeyville, then along Western Run and the Gunpowder to Warren and back by path through woods to C. I left home about 7.30 A. M., arrived at P. 8.40 A. M. and at L. 9.20 A. M. Left L. on 9.35 A. M. train and arrived at C. at 9.45 A. M. I then proceeded out along the railroad tracks to Beaver Dam Run, <sup>then</sup> followed it <sup>up</sup> along the right bank. At A. the run joins Western Run; this stream was then followed until it emptied into the Gunpowder, and then the latter stream down as far as Warren. The first part of this trip was not very interesting, only near Ashland, where several fine hemlocks were observed did I think the spot worth visiting. But beyond A. the scenery becomes superb. I do not think that I have seen anything to equal it. At some places the gorge seems almost impassable. At several places I managed to proceed only with the greatest difficulty. I would proceed a few steps and then stop and admire, I must surely get photographs of this most beautiful of all gorges. I was greatly surprised & pleased

Dec. 5  
(continued)

to find here the White Pine growing most luxuriantly. The little crustose lichen found so plentifully in the ravine at C. was found here equally plentiful. Then too, another was found also a crustose form on a rock close to the large flat rock where I ate dinner; in this, however, the thallus was rather green and the apothecia were quite different. At one spot the gorge becomes very narrow, here the scenery is beautiful beyond description. Here I found a pretty fern, I think there is a possibility of it being Nephrodium spinulosum. On the large rock already mentioned I found Bazzania trilobata in abundance. It showed reproductive organs quite plainly. At the narrows I found a log covered with a pretty Cladonia, I made it C. delicata. Another pretty lichen was found on the bark of a decaying twig - a crustose form with beautiful apothecia.

A beautiful grove of hemlocks is found at the junction of the run with the Gunpowder. Here under the trees I found Lycopodium lucidulum. While going along the G. I came upon a tree covered with Polyponus. Again noticed the sweet heliotrope or anise-like odor when the fungi are stripped from the tree.

Arrived at W. I took the path through the woods back to C. arriving there in time to take the 4.35 P.M. train reaching L. at about 4.50 P.M.. Back to T. by 5.30 and home by 6.30.

788 9 I had hoped to take a trip to Round Bay to-day, but when informed that the fare was \$1<sup>00</sup>/<sub>100</sub>, changed my plans and went instead along the Patuxent. Took the car at Camden Station and proceeded to the terminus at Mt. Vernon. Then walked out Washington Rd to Sulphur Spring Rd. <sup>thence to Capital</sup> On the way found two Cladonias, one at the swamp <sup>near</sup> and one opposite the old hotel. Arrived at A. I crossed the river and proceeded along the River Rd. Stopped to eat lunch at Gunther Place; then went up the hillside to Hanson's. Immediately after eating dinner I secured some fern fronds. Arrived at the top of the hill, I paid particular attention to the pine and cedars. I found two kinds of pine Pinus strobus and P. rigida. The cedars were examined for berries; only a few were found with them.

I visited the persimmon tree, but found that the fruit had been removed. I collected a pretty little lichen from one of the trees. Returned to River Rd by way of the ravine. When near the road it began to rain and continued to do so the rest of the day. Crossed the river again at Orange Grove & proceeded up Hilton Av. to the car. Returned home at 5.15 P.M.

789

12

A trip to the Severn. I left home a little after 6 A.M. in time to take the 6.38 A.M. train on Short Line for Glenburnie. Arrived at G. a few minutes past 7, I set out at once for Benfield. The morning was beautiful. On the way down before the sun arose, Venus showed herself beautifully in the eastern sky. Before reaching G. the sky was beautifully colored with tints of red. The ground was frozen hard, and thermometer must have been as low as  $35^{\circ}$ , but as there was no wind it felt delightfully pleasant and as the day advanced, it became more and more agreeable. I did not tarry long on the way so reached B. at 9 o'clock. On the way down kept a sharp look-out for Juncus and Pines particularly the former noted two spots where there were larger-sized female trees laden with berries. At B. I took the road leading to R's. but proceeded only as far as Bear creek. Just before coming to the spring I found a pretty spot covered with Lichens. Ulex barbeta was quite plentiful. I notice two kinds one much finer, more delicate than the other. Another common lichen, abundantly in fruit must be a species of Cladonia. Then near the foot of a tree I found Cladonia. I spent some time here collecting specimens. Here too, I found C. rangiferina in fruit. I proceeded to the stream and made my way slowly towards the spring. Beautiful patches of Bazzania were observed and also some of Georgina pellucida. Holly trees with berries were very abundant and I secured a nice bunch of pretty branches. There was so much to observe that it was nearly noon when I came to the boiling spring so I decided to eat my lunch. After dinner I crossed the creek, and secured some specimens.

Dec. 12.  
(continued)

of Cypress, also more Holly and more Lichens, following the path to the road. I then entered the woods north of the road. Here I found some very pretty Ulex barbata. It was now nearly 2 o'clock so decided to go slowly back to G. Just beyond the schoolhouse near B. I found some fine specimens of Pinus strobus and P. rigida. Reached G. in time to take 5:17 P.M. train for home. Arrived home about 6 P.M.

790 16

A trip to Back River Neck. Our beautiful weather came to a sudden stop yesterday with a heavy down fall of snow. Possibly six inches of snow fell. To-day it has been cloudy and sleety covering the trees beautifully with silver thaw. I undertook this tramp to-day mainly to get some pretty holly. Nothing particularly interesting was observed until I came to the bridge, here I observed some interesting lichens on the trees. Also where I turned in to eat my lunch, where at the base of a decaying tree I found some fine Stictis amplissima. When quite a distance below the school-house I found in an open wood on the left some fine holly trees beautifully printed. The weight of the ice on the trees is doing considerable damage.

Returned home about 2 P.M. with a fine supply of the 2 lvs.

791 19

Toward Swan Creek for holly. Much of the snow has melted, most of the fields are uncovered but in the woods there is still an inch or two of it. I found plenty of Physcia on the peach trees in the orchard near the school house.

Turned into the woods just beyond the new log house.

Here I found Holly in abundance, plenty with pretty berries. I was sorry to find that so many trees had been cut down in order to get the berries. I counted 12; it was from these that I secured 8 some fine specimens. Returned home by five o'clock.

792 23

The weather again is mild, all the snow has disappeared. To-day it is cloudy and it has been raining. Took a trip to the ravine to get more and some ferns. Besides these, I secured two lichens and a fungus. Both lichens were found on rock and both were quite abundant although neither were over abundantly fruitful.

Both mosses & lichens were in fine condition. Observed that the sporophyte of Dicranum scoparium is already developing. Urbina coccinea was found abundantly.

793

- 28 With George to Cockeysville and Bear Dam Run. We reached Towson 8.20 A.M. and took the usual route to Lutherville. Here we secured a picture of the old negro chanty and then proceeded to the station to await the 9.30 A.M. train for Cockeysville. We had timed ourselves pretty well so had not long to wait. At 9.45 A.M. we were in C. We proceeded at once towards the quarry and after examining them we followed Bear Dam Run. A brief stop was made to take a picture of an old ruin. After taking the picture, we continued our trip along the run, crossed it at the little foot-bridge. Here we observed such a good view of the ruin that another picture was taken. We were so sorry that the beautiful front work on the trees had disappeared. This was simply beautiful in the morning, every twig was so thickly covered it stood out in bold relief. This though had now disappeared entirely. We now recrossed the stream and followed it keeping on left bank until we came to Barman's Run. This was crossed with difficulty, but we succeeded in crossing it & finally entered the ravine. On the way we secured some garnets. Immediately after entering the ravine we ate our lunch. After dinner we proceeded slowly up the stream. The stream is quite beautiful but I do not think it equals that of Barman's Run. A number of beautifully moss-covered <sup>& lichen-covered</sup> rocks were observed. We proceeded along the stream until we reached the old ruins. Here we walked up the hillside to the fence then along the fence to the road, to enter which we had to open a large gate. This road was the one to C. On the way along the run we secured a fine picture. Now at the bridge across Barman's Run we secured another. We reached C. about 4.10 P.M. and having plenty of time, secured our last picture - one of the quarry. We took the 4.35 P.M. train for L. returned from thence to F. & then took the car for home.

Dec. 30 To Middle River Neck. Morning, bright and beautiful but very blustering; remained so all day. During the entire week the weather has been quite mild. On Thursday, about an hour after returning home, it began to rain, and did so all night. Yesterday morning it was clear. Shortly after noon, the sky towards the west looked threatening and it looked as if we might have a thunder storm. Presently we had a passing shower, the sun came out again, a beautiful rain-bow showed itself towards the north, and the remainder of the day was clear. Towards night it began to blow colder and to-day it has continued. I left home about 9.30 A.M. but it was 11 o'clock when I reached my destination. I crossed the bridge and proceeded out the road. After going about  $3/4$  mile I turned into the woods, <sup>traced by</sup> numerous roads and by-ways which led to the various fishing shores. The ground here is very flat and the drainage is bad, as was noticed from the many swampy spots. The woods consist of pine and various deciduous trees, mainly chestnut; holly and Laurel were also abundant. I proceeded down one of the roads until I came in sight of the river. A fallen chestnut tree formed a convenient seat, on which to sit and eat by lunch. Here too, I found a nice lot of Cladonia macilenta. After dinner and after coming in sight of the river, I made my way towards one of the <sup>little</sup> inlets. At the head of this inlet I found a nice lot of one of the hepaticae, and on the tree a lichen Stictis amplissima. More of the hepaticae was found in several other places and I secured a nice lot of it. Notwithstanding the wind I enjoyed my trip very much. A nice specimen of Monatopa uniflora gone to seed was examined, but no seed was to be found although the capsule looked good. The plant was dry out of the ground but there was apparently no living underground portion. While walking about found a low evergreen which I thought at first new (not knowing the plant to be an evergreen, and is not when larger (?)) but which I think now must be Myrica. Returned home about 3 P.M. and arrived there at 4.30 P.M.

1806.

Jan.  
795

2.

I took a trip to-day to Bear Run. I have frequently thought of visiting this stream but have always neglected doing so. To-day, however, I decided to undertake this trip. The day was an ideal one, no wind, the sun bright and the temperature delightful. I left home a little before 9 A.M. so found myself on the Rolling Rd. an hour later making my way for the Johnny Cake Rd. Nothing particularly interesting was observed on the way, so found myself at Hollapfield about a quarter past 11. I then proceeded up the river to Bear Run. Seeing a road here going in the same direction as the run, I proceeded along it a short distance and then followed the run. I soon saw that my expectations regarding Bear Run were not to be realized. Instead of having beautiful woods to roam through I found only here & there thin patches of underbrush rather than trees and nothing but cleared places. After a walk of  $3\frac{1}{4}$  hr. I came to an old ruin, no doubt once a mill, which fire had destroyed. This old ruin was quite a picture. After leaving this old place I came to some thin woods. Nothing interesting, however, was observed until I came to the first bridge where just before reaching the head I found a nice group of Linden trees. That the trees bore an abundance of fruit was evident from the quantity on the ground. I kept on the right side of stream all the way. Chimacium Americanum was observed everywhere, I have never seen it so abundant and at the same time so beautiful. I hoped to find fruited specimens but with the exception of one single plant was doomed to disappointment. After several hours walk I finally came to Windsor Rd. and here I believe was the best part I had passed over. Numerous little streams from springs made the land rather swampy and I think will pay visiting in the spring. While going along the pike I made an interesting little discovery. On both sides of the road quite a number of plants of Euphorbia Lathyris L.; I was surprised to find the plant apparently unaffected by the frost.

Jan. 2  
(continued)

The remainder of my trip was made without unusual discoveries. I secured however, some fringed specimens of the pretty little yellow Lichen which is so common.

- 796 6. A trip to Cockeysville and vicinity. As on former occasions, I went by way of Towson & Lutherville, so arrived at C. a little before 10 A. M. The weather early in the morning was delightful, but towards 9.30, it began to blow and it became very blustering. To-day I decided to visit Phoenix and see, if possible, the old mill with the overshot wheel. I was also anxious to see the Bumpolder. I was somewhat disappointed with the beauty of the B. nevertheless, continued some distance beyond Phoenix to a large granite quarry. Decided to return, as it was so blustering. Returning to Carroll Br. a stream just below the quarry, I turned in hoping to find a sheltered spot to eat lunch. Did not find any very sheltered spot, nevertheless took the best, I could find and ate my lunch. After dinner returned to railroad and back to Phoenix. Where I asked about the mill and was directed to it. I was told that it would take about an hour to go and return, decided, therefore to undertake the trip. Proceeded out the "Phoenix" Rd to the iron bridge which here crosses Carroll Br. Not being told on which side of the stream I would find the mill, I took the left side, seeing on this side a road. Of course this was the wrong side as I soon learned and I decided to cross the bank. But this was not so easy and more time was spent trying to cross than it would have taken to return and go up on the right side. However this part of my trip and my attempts to cross the stream were enjoyed extremely, in fact, this was the best part of the day's program. After several attempts, I finally succeeded to cross and of course reached the mill, no reproach going to ruin. A pretty yellow lichen was here found in quantity on the side facing the south, but as it was out in front, I did not take any of it. Returned down the P., crossed the river and proceeded along the right bank. This too was enjoyed very much. Most beautiful specimens of Camptopoma were observed on some of the rocks. In one spot too, were Corydalis in quantity.

ty. This part of my trip will be worth visiting again later. When I got back to the railroad I continued along it back to Cockeysville.

797

- 9 A short trip to Brooklyn. Our second snow for this winter came yesterday towards 5 P.M. Possibly about <sup>one and a</sup> half of inches of snow fell. To-day it is much colder, but the sun is shining bright. I took my usual route through the little ravine and along the river visiting the Skunk Cabbage spots. Found the plants in bloom, the snow on the ground, however, hid many of them. After securing some fine alder twigs, I started homeward, arriving there about 2 P.M.

798

- 13 With Percy to B. along road to Pumphrey's Station and then home by way of Annapolis Rd and S. L. R. R.

We took the car to B. and then walked. Found again those peculiar black knobs at base of decaying tree trunks where I find *Coprinus micaceus*. From what I have read in Mycological Bull (or No. 49) I believe this due to something akin to the parasitic fungus there described. I have not studied it thoroughly however, so cannot yet say it is identical. When a knob is cut in half lengthwise and <sup>the cut surface</sup> examined with a low-power lens one observes close to the surface numerous little openings  $60^\circ$  as here indicated.

Secured specimen of Skunk Cabbage

799

- 16 A trip to Catonsville, Annapolis and along B. & O. R. R.

Took the route along Inghamside Av. for a change. The day was delightfully warm but very muddy under foot. Secured some nice specimens of *Cladonia* near T. Smith also the bark Pussy Willow. The trees bearing them have been pulled to the ground.

800

- 20 A trip along the Gunpowder. Left home about 8.30 A.M. reaching T. about 9.30 A.M. Proceeded out Dulany Valley Rd to Murch Rd, then along it to the river. Did not leave the river with the road but continued along it. This part of my trip was quite interesting but found nothing particularly noteworthy. Found a great many Orange Orange trees

Jan. 20  
(continued)

The fruits were scattered everywhere over the ground. A few rocky places were passed and these were quite interesting. The Campocoma were very abundant and on several rocks the Asplenium Trichomanes was also. A few plants of Pellaea were also seen. There too grew the hemlock. When within a short distance of the bridge I found Entocarpus - that umbilicate bichen found first on my trip to Overshot Run - on an outcrop of rock. Arrived at the bridge, I crossed the river, cut across the field to the road and then proceeded along it to Warren. At two spots I think beautiful pictures could be taken, otherwise found nothing particularly interesting. Arrived at W. I proceeded along the Warren Rd. to the Coburnville Rd. Returned by way of this road to the <sup>Little</sup> Delany Valley Rd. and then proceeded back to T. While going along this road in the morning I collected two yellowish bichens one from a tree trunk and one from the old fence rail. Collected also a few fertile stamens of Cypripedium hirsutum. The day was cloudy. The weather bureau had predicted rain but it did not materialize. The new toll-gate keeper is named Peterson.

801 23

A trip to the willow place near St. Agnes' Hospital. For several days, it has been very warm, this is the 3<sup>rd</sup> day with the thermometer registering as high as 64°. To-day it is cloudy and occasionally we have a little shower. The air is saturated with moisture. Its effect upon the low forms of plant life is marvelous. Protocoma is very abundant and of the prettiest shade of green. *Need frogs*

I visited the willow region first, but found them very scarce, no plants at all compared to the number found formerly. What is the trouble? Have they been destroyed?

From willow place, I proceeded across the country towards A. passing the ponds, and reaching the railroad just east of the village. While crossing a field found Draba verna in full bloom, one already with large capsules, and Stellaria media in great profusion.

Collected in a wood some fine specimens of mist galls, also fine specimen of a black fungus growth on an oak, breaking out in large patches from under the bark.

I reached the P.R.R. just east of A. at a point near the old cemetery. As I passed through the ravine I thought I was near the old burial grounds but could see no signs of it. I decided therefore to investigate. Going up the hillside I soon came to the place and there saw that the old cedar which had formerly stood there had been cut down to make way for an iron fence, this accounted for my not being able to mark out the spot.

Proceeded now along the tracks to Wilkins Ar. On way secured a pretty specimen of a fungus attacking the railroad ties. Quite a beautiful form, black above edge tinged with white, with under surface light yellow.

- 802 27 Took Percy with me to-day along Guyan Falls from Windsor Mill Rd to Guyan Oak Park. Since Tues. the weather has been colder and more or less cloudy. On Thurs. the barometer was very high 779. mm., notwithstanding, it was cloudy and towards evening the winds were from N.E. All day Friday the wind was N.E. and of course it was cold and chilly and disagreeable. The weather bureau predicted snow but none came. To-day again snow is predicted and the wind is still N.E. We left home about 9.30 A.M. so arrived at the falls about 10.30. We left the road and proceeded along the bank. In the little pools near the road & just beyond the bridge a great abundance of Springer was observed. A nice lot of Polyzona was collected about 1/4 mile up the stream. When a short distance from the crusher we again followed the road. Nothing particular was now observed until we came to the dam. Here I found Baryer rosea in quantity. Here too we met a young man taking pictures. We ate our lunch at the old quarry. After dinner continued our trip up the falls. At the little brook where on former occasion I found Paele primate, I found more of it, beside a pretty anemone more growing on rock - I think it possibly a Bruchia. Collected here too a lichen - most likely a

Jan 27  
continued.

Leucidea. It formed pretty orange colored colorations.

At the spring I collected some fine Leyceum calyptrata. Here  
two and below at the brook I observed that same Cladonia  
C. cespiticia?, which I collected on rocks in the ravine.

Arrived at Gwynn Oak An. we crossed the bridge and then went  
up along the left bank of the falls and its first tributary.

On a tree near the old bridge I found another Leucidea.

Beginning with 2 P. M. we had an occasional shower.

Arrived home at 4.30 P. M.

803 30

To Benfield and vicinity. I left Camden Station on the early train  
and reached B. at 8.30 A. M. The morning was beautiful, the  
air crisp and fresh yet mild; the ground, trees & hedges were  
covered with hoar frost. It was about quarter past seven when  
I caught the first glimpse of the sun. Arrived at B. I pro-  
ceeded at once to the path leading into Obacht's where I col-  
lected a number of fine lichens. Several fine ones were found  
on the bark of the holly. I then collected some fine specimens  
of Usnea habelata, not only here but also near the spring. Apparent-  
ly 3 forms are to be found. The ordinary form with barbed stalks  
is found most generally on trunk of trees, or little shrubs, high  
from the ground and only occasionally low down. The second  
form is composed of very fine stalks, not at all barbed, and so  
fine and long and so many stalks together that it looks like  
so much wool. This form grows quite low and is seldom  
found in fruit. The apothecia are quite small on the few  
specimens thus found. And then there seems to be a  
third form intermediate between the two. It, too, is found  
growing low and seldom in fruit. One of the prettiest sights,  
however, I have almost forgotten to mention - that is the play  
of the sun light upon the frost covered shrubbery, just as it  
was about to disappear. How beautiful! Here were all the colors  
of the rainbow scattered about like myriads of little electric lights  
the blue and yellow predominating. At the stream I stopped  
for some time to admire the pretty sight. After collecting the  
lichens, also some twigs of willow and after eating my lunch, for it

was close to twelve o'clock I set out for the old mill.  
 I had little trouble finding it. I was very much surprised  
 to find it again in working order. To-day, I decided to go  
 up Seven Run a short distance. Questioning the owner  
 of the old mill, I was told that the right side of the  
 stream would be the better side to take. Finding that the  
 road kept close to the run a short distance I followed  
 it and was pleased to find just a short distance beyond  
 the mill a fine colony of Lygodium palmatum. Here, too  
 were pretty specimens of the Red Birch. I soon came to  
 where the road divided or forked, I took the right hand  
 road, but seeing that the pretty brook was down the  
 hill and far more pretty than the road I left the road  
 and followed it. Before long I heard the noise of a  
 water-fall and very soon came in sight of it. While  
 on my way to it I passed another colony of Lygodium.  
 The water-fall was at the dam where the water was led off  
 through the race to the mill. Seeing here a path to the  
 left bank I followed it and finally crossed the run. I  
 soon did not know whether to go up along this bank or  
 return and continued along the right bank but soon de-  
 cided to follow the left bank. I soon found that I  
 had no cause to regret my decision. A pretty ravine of  
 its kind I have seldom been in. The ravine should by  
 all means be called "Lygodium Ravine" for colony after  
 colony of this beautiful fern is here to be found.  
 So many were found and all in such similar localities  
 that very soon I could almost predict where another  
 colony was to be found. In this ravine many pretty  
 young trees of Pinus rigida are also to be found.  
 Examination of the shoots, soon showed that this  
 tree retains its leaves two years. Another interesting  
 fact observed was that the leaves always appear  
 along the upper  $\frac{2}{3}$  of ~~the~~ each new growth.  
 My trip up the ravine was along a path. After a while

Jan 30  
(continued)

I came in sight of what appeared to be a railroad bridge. Examination showed that it must have been the bridge intended for the electric line to Annapolis. I now found that it was quite pleasant and interesting along this abandoned road way so followed it. This I did until I reached the end at a tributary at a point on the line with the school house. Finding that I had plenty of time to reach the station, I decided to try to find my way across to the other road.

Descended therefore to the brook which here was more of a swamp. After some trouble, I succeeded in crossing. On the hillside found a few nice specimens of Lycopodium complanatum and here too found some Lycopodium. I proceeded back to the tributary entering from the right and then followed it. It too proved beautiful and after going a short distance (just beyond the little clearing and field), I came upon the largest tract of Lycopodium I have yet seen. Finding now that it might possibly take too long to reach the other road, I climbed up the hillside again and proceeded across the fields in the direction of the telephone road and then along it to the station. The day from beginning to end was delightful and perfect.

804.  
Feb. 3

Quite a change in the weather. The thermometer below freezing all day. Took a trip to-day out Green Sp. Ar. to Slaughterhouse Run, then along it to the falls and back to Mt. W. by way of the pike. My intentions were to go to Mooser Br. but for some reason or other passed it. The trip out Green Sp. Ar. was interesting from the finding of a nice sized tree of Eng. oak right at Western Run. Then too, some fine Elms were observed, one at the Run and several before reaching Western Run.

Arrived at Slaughterhouse Run I observed that a trip up stream might also be profitable, but as I had already decided upon my route proceeded down stream. The trip at first was interesting especially so as there seemed to be good prospects of a trip through dense woods, but this part of the trip was soon made and then came nothing but fields and when the interesting hills came again

the road was in sight. Nevertheless the trip as a whole was worth taking. When I reached the road - Fall's Rd I was at Rockland and here I learned the reason of having the pretty pond on the hillside. It was the source of clear water for the bleaching establishment. I learned, here, too, that the clay (?) they use comes from England. Started homeward now. When I came to Bare Hill I decided to follow the run but found nothing particularly interesting. Passed again the old church ruin, and found here old stalker of Cassie May Landree.

- 805 6. A trip to Brooklyn. Observed the Norway Spruce and learned that it retains its leaves for 4 yrs.

The cold weather continues and the ground is frozen. It is a little colder than it was Saturday.

806. 10. Late Thursday afternoon the third snow of the season began to fall. At 10 P.M. more than 2 inches had fallen and the prospects were a deep snow; but during the night it turned into rain so that next morning streets and pavements were several inches deep with slush. Later in the day most of this had disappeared. To-day the snow is gone in many places, only in the woods and places protected from the sun is still a little of it.

Decided to-day to take a trip to examine some of the tributaries of Stony Creek. Reached my goal without much difficulty, but found the trip so discouraging and so uninteresting that I decided to return. Ate my lunch therefore, and after that began my trip homeward. When close to Solley's place, seeing a pretty path leading into some pine woods I decided to examine the place. It proved most interesting and worth further study. The path leads to a pretty run, filled near its head with sphagnum. On the trees I found two pretty lichens. After a short stop continued <sup>on</sup> my way homeward. When near the Marley Br. Rd. I made my way to the Pine woods and learned that with White

Feb. 10  
(continued)

Pine the needles are retained two years. Learned to-day that a colored man named Cook owns parts of this White Pine tract. Arrived home at 5 P.M.

807 13 To Devil Hill Park for Horsechestnut twigs. From thence along Park Heights Av. for Tulip-tree twigs

808 17 To Fresh Pond. Took Steam Patrol to a landing in Rock Cr. I had hoped to get up to the Head of the Creek but the ice was too thick to allow the boat to get up. We were obliged to get off at a wharf beyond Fairview. To pick my way to the Mt. Rd. was no easy task, especially so until I got upon the main path. This path from Lindrope's and brought me right to Lake shore. To-day I went at once to the little pond near the road. Saxacum is found here in quantity not only along the edge of the pond but also along the stream. From the pond, I proceeded along the left bank of the stream to the creek and then along it to Main Cr. On the opposite shore of Main Cr. right at this point is a pretty wharf. Arrived at Main Cr. I proceeded up stream to the next tributary then along it back to the field and then to Mt. Rd. The trip was quite interesting, but would have been far more so if there had been less brier to contend with. This little stream had also a pond not far from its entrance into Main Cr. It was half past two when I got back to Mt. Rd. and decided to walk home. Found Mt. Rd. all right for walking but when I got to the road leading off towards Curtis Creek my troubles began. At first <sup>it</sup> was almost impassable from the depth of sand and then practically impassable from the mud. The long stretch from the head of Stony Creek to Solley's is in fearful condition. It took four hours to reach the electric car. and four and half hours to reach home. The day was beautiful.

809 20 To the ravine. One of the prettiest days this year and possibly the warmest up to date. Took usual route, stopped at spring. Crossed the Patuxent to get elm buds and then returned to care by way of Hilton Av. Saw some butterflies & plenty of flies

810

- 22 With George and Ed. along Western Run. The day was an ideal one but the rain yesterday made the ground pretty wet and therefore the walking was pretty bad. The stream was even prettier than on my former trip due to the increase volume of water. We ate our lunch at same rock where I ate mine on that trip. Secured a pretty lichen no doubt *Stictis* from a tree trunk, also a nice lot of *Frullania* *Acagarrana* from a low stem. Found to-day *Taraxacum* and *Aureo-lary carpinum* in flower.

811

- 24 To Furnace Branch and the old furnace. The day again is mild and spring-like. Secured a nice lot of *Symphlocarpon* *putidum* at the branch. While looking for it found again that greenish gelatinous looking algae (v. 3.4.05). At first, I thought I had found *Batrachospermum*, then I thought it the same form found at S. M. P. last March (v. 3.28.05) but think now it was is the same as covered the pool near Pumphrey's. Here it was in long gelatinous streamers attached to sticks, dead leaves etc in the <sup>bottom of</sup> stream, moving continuously due to the current of the stream. Brought some home for study. Found *Oreocentrum* almost in bloom. Just as I reached the bridge at the branch on my homeward trip I was surprised to see an automobile coming along the Marley Rd. When it came up to me recognized Mr. O. who asked me to jump in. This I did and I soon was whirling homeward arriving home in just 30 minutes.

812

- 27 Visited Clifton Park for evergreens. Secured specimens of quite a number. Examined them in order to learn how long some of them retained their leaves. The Norway Spruce - *Picea excelsa* holds its leaves from 4 to 5 yrs., as do also the Colorado Blue Spruce and the white spruce. One of the fine *Abies* *Pineapo* retains its leaves 5 yrs., whereas the Silver fir retains them only 3 yrs. The yew & *Cunninghamia* likewise retain theirs 3 yrs.

- 813  
Mar. 3 Rain all day. A trip to Brooklyn for Skunk Cabbage. Found again several species without species. Observed to-day that the alders in the little ravine must have been in flower already a day or two ago. Found too that May apple is above ground.
- 814 6 A trip along Deed Run. Observed, to-day, for the first time, the conifers in the estate, at the intersection of Winton Mills Rd and Franklin Rd and was pleased to find among them several Silene Fies I think Abies Nordmannii.
- On my way out Franklin Rd I stopped to see how the Climacium Americanum, at the Duin place, was looking and was glad to find much of it in fruit, secured a nice lot of it.
- Alders were observed to-day in full bloom and Wegel almost so. At the rocks - the walking-leaf rock, I secured several hepaticae and a hiker. The hiker was one also found in ravine near Camp Cozy. Found the mill, and overshot wheel one, in operation. From F. proceeded to Wicheyville. Here I found that a bridge was being constructed for electric railway across the falls also a road into D.
- 815 10 To Benfield and vicinity with O. O. We took the early train to Glenburnie arriving there at a few minutes past seven o'clock. We set out at once for B. When we left home, it was quite warm, the wind was from the south and it looked as if it would be cloudy. Before we arrived at B. it was clear and the sun was shining but soon it was cloudy again and before long it began to rain. The rain came in little showers. This kept up until we reached B. by which time the wind had veered towards the west and it began to blow quite hard. Before long it was clear & the sun shone beautifully which it did the rest of the day. The wind blew all day, at times, it blew almost a gale. When we arrived at B. I decided to visit the Schweinitz's place. This we did, the plant was soon found, but not in flower. We now went to Bent Oak, on the way found a species of Parnelia in fruit. From Bent Oak, proceeded to the Boiling Spring where we ate our lunch and then to Barton. It was past 11 o'clock when we returned to Benfield. We now set out for the old mill

and the Lygodium. This time we proceeded up the hill until we came to the first tributary. Because of an error on the map we entered the woods before we had really reached this tributary. Notwithstanding we had little trouble finding our way to the stream. On the way heard the frogs making that peculiar croaking which they make at the time of copulation. A nice lot of eggs were found; I think this is the earliest date for finding their eggs. Found Lygodium palmatum in a great many places. At one of these found Lygodium obscurum in fruit. Just a short distance beyond came to the road and the bridge of Dunn Rd. We crossed the bridge and proceeded up the stream. Found again plenty of Lygodium and in one place - marked by twin oak more Lygodium in fruit. One of these specimens was marked to see what becomes of the fruit. After proceeding up stream for a short distance on left bank crossed the stream and proceeded up the right bank to the road. This was found quite interesting although rather fatiguing. Everywhere green Lygodium. Arrived at road proceeded along it back to main road and to Glenburnie. Clouds of dust were encountered on our way. Reached G. in time to take the 5.17 P. M. train and arrived home before 6 P. M.. Fine specimens of Linum were gotten from fallen logs. Found the school house near Benfield burned down completely. We both enjoyed our trip very much.

816

11 Morning: Took a trip over to Brooklyn for Skunk Cabbage. The weather was ideal, quite a change since yesterday. Specimens of Symphlocarpus are hard to find in good condition. Found a link of Acer rubrum broken from tree & in full bloom. Afternoon. Trip along Rolling Rd. Found Alder and Acer dasycarpum in full bloom. Observed specimens of Picea on the lawn in front of house opposite Jamie's. Along road observed many species of Cornus.

- 817  
Mar. 13 To Brooklyn for Mayapple. Snow all day. Secured a nice lot notwithstanding the snow.
- 818 17 St. Patrick's Day. Since Tuesday there has been rain & snow. Yesterday it cleared but did not remove <sup>all of</sup> the snow. To-day it is quite raw, at times cloudy, so that the snow is melting very slowly. Decided to visit Story Run. Rode in electric car to Columbia Av. terminus then proceeded out Washington Rd to railroad. Found nothing particularly interesting so did not linger long. Had quite an interesting chat with the attendant at the water trough. Returned home by way of B. & O. R. R.
- 819 20 To the ravine. More snow yesterday, and to-day the ground is covered with from 2 to 3 inches of firm frozen snow, firm enough to walk over it. My trip was mainly to get frog's eggs. On account of the rain the brook is quite swollen and I could cross it only with difficulty. After going through the ravine I cross the Patapsco at O. G. and went along the River Rd to Avalon securing the few remaining catkins from the willows at the spring. From Avalon proceeded by way of Sulphur Sp. Rd to Wilkins Av. Electric Line. The winds were very strong.
- 820 21 With Miss A. to P. & M. R. R. at Roland Park to see the fine willow tree. We had expected several more members of our botany section to join us, but none appearing we visited the place together without them. We soon found the tree but <sup>it was</sup> partially blown over. I took several cuttings and planted them, possibly they may root & then give rise to new individuals. We took several fine charts along with us.
- 821 24 To Benfield. The weather raw and disagreeable the wind from the N. E. Took the trip to-day to get specimens of Parmelia and P. . The former is considered quite a rare lichen. Here it is found almost entirely on lvs of oaks. The other is found on rough barked trees generally oaks. On my way down planted some slips of willow at the pond & also near the spring. After securing the lichens I made my way towards Odenton. On way found a pretty green lichen and at the swamp secured a pretty specimen, which later became mislaid.

\* Found seedlings of *Impatiens fulva*.

822

27

Found O. without trouble. As I wished to see something of the country walked home the entire way. On way home it began to rain. To Brooklyn. Hoped to find frog eggs but failed to find any. Planted some willow chips in the little ravine. Secured some fine specimens of red maple in bloom. Robins are now quite abundant, as too the meadow larks. The singing of birds is now a regular treat during the early hours of the fore noon. Skunk Cabbage is almost a thing of the past, it is hard to find good spathes. Opened a few seeds, noticed two peculiar greenish lines running through them.

823

31

A trip again to Brooklyn for Skunk Cabbage of which I secured about 150 specimens. Found *Chrysopsis americana* in bloom. *Podophyllum peltatum* is coming up everywhere. Another very disagreeable day.

**Seedlings of *Impatiens* showing themselves**

824

April

3

A trip to Stony Creek. A perfect spring day. During winter & early spring the boat leaves at 6.30 A. M. We arrived at head of creek about 9.15 A. M. I proceeded at once to Mt. Rd then turned to left and went east towards Danman's; here I took road to Waterford. On way found frog eggs in quantity in ditches along road side. I entered the woods before reaching the old hut. Here I found *Citronia ciliata* quite common on various old pines. When I came to the old hut, I proceeded to the run, and examined its banks a short distance, made a nice find: a colony of *Lycopodium obscurum*, two specimens still in fruit. After seeing the old mill I took the route to the bridge. On way secured fine specimens of *Opuntia vulgaris* also many specimens of *Cladonia*. Learned today that I can reach the wharf at Stony Run in one hour & a quarter from the bridge. Found *Turleya fœœa* just a short distance from Mt. Rd on my way back. There was but one flower. This road to bridge is beyond D's, about 15 minutes walk from him and about 45 min. walk from wharf.

+ Examine again later the limestone near the spring on way to Dickeyville. Was it Marquette, or what? It was beginning to fruit. We visited also the evergreen just below Warden Mill Rd. Here were Spruce, Fir, Pine, Arborvitae and Red Cedar.

825

April 6. First trip with botany class this season. We met at bridge beyond Mt. Holly Inn. In spite of the blustering weather and short notice a number of members met. We took the trip up to D. We found everything rather backward<sup>+</sup>. The following plants only were found in flower:— *Ulmus fulvus*, *Acer rubrum*, *Stellaria media*, *Poa annua*, *Corylus Americana*, *Alnus serrulata*, *Symphoricarpos foetida* <sup>and *L. virginica*</sup>, *Hepatica triloba*. The Pichly Ash was visited but was not in flower. All seemed to be very much pleased with their trip.

826

7 A beautiful day. Left home about 7.30 A.M. for a trip along the Patuxent above Union Dam. On trip collected twigs of Tulip and Hickory. Tulip twigs were easily obtained but the Hickory was not so readily found. Secured nevertheless a good supply. On the way to the old pump-house I passed the remains of a liliaceous plant. It seemed quite new so I marked the tree immediately before it; believe now, though that it is *Chamaelirium*. One of the first plants found to-day was *Horsetonia caerulea* in full bloom. I crossed the stream at the dam and just beyond it, found *Erythronium* <sup>April 4, 04.</sup> <sup>" 7, 05</sup> in bloom; I was quite surprised for March has been very cold and the vegetation backward. It is therefore on time. At the curve, I found *Sanguinaria* <sup>Claytonia Virg.</sup> and *Dentaria heterophylla* in bloom. Besides these found also *Poa breuifolia* and *Saxifraga Virginiana*, and later *Barbarea vulgaris* (?). *Hepaticas* were quite common. On my way home (Johnny Lake Rd) I passed a house with a garden in front of it, in which was a pretty willow I think though that I passed some of these same willows at the junction below Rolling Rd. When quite close to Woodlawn I passed some fields in which, close to road, was growing that thick broad-leaved *Sedum*. The day from beginning to end was quite an enjoyable one.

827

8 A trip to Hamilton. Short walk back to Laneville. Found *Epigaea repens* in bloom.

828

10 Through the ravine. Arrived at Catonsville terminus I walked up to the Old Frederick Rd to see the willows which proved to be some of that fine large catkins variety. After looking at them proceeded back to Hilton Co. where I got some fine Hickory twigs.

I then proceeded down the avenue to the path leading to Fox Run. Ate lunch at the bend of the road and then walked over to the Equisetum hyemale spot. Here I tried the following experiments: - First of all, about 6 ft. from a triple set of trees in the direction towards a large beech I stuck a willow wand into the ground (one of that large catkin variety). Here too, but on other side of trees and within a few feet of them, I transplanted a specimen of the Ostrich fern, two pieces of wood lie here, one on each side of the fern. Now go towards the stream, in the direction of a large Tulip tree, passing across the Equisetum, at the double oak will be found a piece of Equisetum with a piece of cotton tied around it; the piece is a cutting. Now following the stream, <sup>to a spot</sup> and a short distance beyond the Equisetum, here, near a marked tree will be found 8 cuttings of Equisetum planted upright and 2 pieces, one on each side of the 8 specimens lying flat.

I now went to Fox Run and to the Myrica place. Here I expected to find a good place for the Ostrich fern but failed to find it. Planted, however, a twig of the willow near the Myrica and one at the marked tree close to the run. Proceeded down Fox Run and at the fallen Juglans across on left bank of stream, I transplanted 2 of the ferns at the base of a red oak tree; marked the tree also spots where the ferns were planted. Continuing down the stream and keeping on the left bank, I soon came to a nice flood plain, here on the hillside, right half way the entire length of the plain, I planted my 4<sup>th</sup> fern, several trees are here marked to show the spot.

I now got out of the ravine and proceeded to Blounting and up the main stream keeping on right bank. A short distance up the stream I came to a fallen Tulip tree. Here in the dark wet ground grow many Erythronium; near the stump of the tree, I transplanted

April 10  
continued.

two more of the Ostrich fern. On the way up found many fine specimens of Aplectrum minus also of Dice palustris, one of which was in bloom. Proceeded up the smaller stream now to a jutting rock keeping on right bank, here I transplanted two more of the fern. One specimen was planted near the rock about 2 ft. from it and about 2 ft from head of pool and the other at head of tree fully 5 ft from the rock, and about 5 ft from head.

Found many willows beginning to bloom. After the transplanting proceeded to Sulphur Sp. Rd and then to Wilkins Cr. Plants in bloom Equisetum laevigatum, Luzula vermicularis, Vivula arvensis var., Corydalis flexilis, Anemone, Cypripedium, Dice palustris.

Numerous seedlings of Equisetum Erythronium were observed. The majority of these had but the narrow thread-like leaf and its single tap root thickly clothed with root hairs. A few, however, were found which had a short down <sup>at</sup> near the seed which was to form the underground bulb.

829 11 Second trip with Botany class. We met at Edmondson Cr. bridge and proceeded up the right bank of the falls.

The American elm was one of the trees found in flower.

830 12 A trip with Martin & Hutchins along Western Run. We met at Towson, walked to L. and took the train for C. We then proceeded out York Rd to the run. On the way saw a boy collecting Vicia blossoms; he called them chicken fights, but did not know why. Arrived at the run we followed the left bank as far as the dam at Western Run. The part traversed was very pretty but of little interest botanically. On the trip found Ranunculus fascicularis, <sup>Potentilla Canadensis</sup>, Stellaria pubera, Spiraea, Thalictrum, in bloom. Arrived at W. R. we decided to return to C. finding, however, that it still was early we decided to go also to the Baismans Run. This we did by way of Western Run Rd. In B's Run I found a spot to transplant my remaining Ostrich fern rhizome, on right bank just beyond crossing close to a large boulder, a tree is

marked to show the spot. Returned to L. by way of the Oregon Rd. The day was a perfect one and we all enjoyed our tramp. M. secured a number of fine views. Good Friday. To L. with Mr. Sempur, to secure plants of Gentiana crinita. We found hundreds of plants. The little plant at this time consists of a rosette of from 4 to perhaps 8 or 9 leaves surrounding a thick fleshy top root.

We visited the Caltha spot and found it just coming into bloom. I tried to find a plant of Spiraea lobata but for some reason failed to locate any.


Found Symphoricarpos in great quantity and in beautiful condition at the Caltha place.

832 14 With Murti along Franklin Rd. We met at the Windsor Mills bridge at 1.30 P.M. Plants found in bloom were Carex Pennsylvanica, Nepeta Glehnhousi, Arabis lyrata, Lindera Benzoin. At the walking-beef rock region I planted seeds of the French Mulberry. Secured some frogs' eggs at the ditch.


833 17 A trip to Glen Ellen and the Gunpowder. My trip through Hampton was for the purpose to see if Populus alba were still in flower, found them, however, beyond this stage. Learned from Mr. Aycock, that the water from the proposed large reservoir will rise to within 150 ft. of Glen Ellen. The dam is to be built just below the 3-arched bridge. I found that Juniperus Virginica had already shed its pollen. Dicentra shows well-developed buds but no flowers. As I passed the Gentiana crinita spot I looked for young plants. The high grass prevented my seeing them for after much search, I fortunately found two plants. Collected a number of the still remaining old stalks with their capsules to send Mr. S. Proceeded now towards the old still house. Stopped at the hillside overlooking the river to examine the Dicentra, here, too, it was only in bud. Began a little study of Erythronium Americanum. Careful examination will show that there are two kinds of flowers, some with brown anthers and some with yellow ones.

\* Stalks of Equisetum taken home a week ago, began to show little papillae on lowest joint in five days. Those on joint above appearing two days later.

April 17  
(continued)

I found plants with brown stamens more abundant than those with yellow ones and more abundant on hillside where none were found of the yellow stamen kind. Thinking it worthy of experiment I marked 50 plants with brown stamens and then 20 with yellow stamens. These latter in colonies at base of hill. I dug up two plants of each kind, found that in both cases that the stalks of the brown stamen variety were longer that is that the bulb was deeper in ground. Both specimens with yellow stamens were double, that is two stalks grew out from same bulb. Stamens of both kinds behave the same way, that is the outer whorl dehiscence first and in both cases the dehiscence is from the base to apex. In the brown variety, there is a marked difference in size of stamens after stamens begin to dehisce the outer whorl becomes much shorter. I do not notice this to occur with yellow variety. The brown variety were marked by cutting the large leaf. The yellow by cutting into edge of small leaf. Two plants just beginning to shed pollen of the brown variety were marked with 2 cuts into big leaf. Microscopic examination shows that plants with brown stamens shed brown pollen and those with yellow stamens shed yellow pollen. The yellow pollen is more fluffy and shed more copiously. Both kinds of pollen have same shape  the difference being that the brown pollen is quite opaque, whereas the yellow is more transparent and the protoplasmic contents more active. I find that stamens are either brown or yellow right from the beginning. Even in the bud they show whether they are brown or yellow. Proceeded as far as still house, then returned & crossed hill to other road. Visited the Caltha palustris spot and found the plant in bloom. Returned then to pipe and started homeward. Found the old stalks of Equisetum hiemale chudding apore, brought home a number of the stalks to examine cuttings. Observed a great many with branches near top. The branching was quite various, caused by the blighting of the terminal bud. Each of these branches was terminated by a cone and their tops were all almost on the same level. In no case were there more than 3 branches from a node, and in no case did the branching descend

below the 5<sup>th</sup> node

- 834 20 Third trip of botany class from Bonnie Bee to Windsor Hills. On hillside found a fine lot of Obolus. Among the new flowers found were Acarum Canadensis, Pedicularis Canadensis. We enjoyed our trip very much and it was after 8.30 before I arrived home.
- 835 21 To the ravine, then along River Rd to Elbridge, thence to Story Run. Left home about 8 A.M. My trip through the ravine was undertaken mainly to plant a few specimens of Calla received a few days previously from A. R. I proceeded at once to Owl Spring. Here I planted 3 of the rootstock. I then crossed the hills to Fox Run and at the fallen Juglans corner where on April 10 I planted my Ostrya ferns, I planted 2 specimens of the Calla. No more were planted until I came to the wet hillside on the River Rd. Here on the hillside, near the tree I planted one specimen. My remaining specimens were planted at Story Run in line with the point where west
- 
- Two in sphagnum at a point about north side of house number 1 at that side of house number 5 is in line. Here a large maple is marked also a small one. The two plants are to be found at a point 6 ft. from large tree and 3 ft. from smaller one. The other two plants are to be found along west side of run near a much-spaced tree. Close to this spot is the Helianthus, some specimens of which were just beginning to flower. Observed to-day again the Erythronium and find that there are plants with a third (?) style of stamen, the anthers of which are only half as long as those of the other two and in color not as dark as the one nor as light as the other. Fifty specimens on hillside were marked for future observation. Cannot yet decide if this is a later stage or an earlier stage or what. Shall observe again.
- Plants in bloom: Violet bicolor, V. pedata, V. scaberrima, V. bicolor var. arvensis, V. primulaefolia, V. cucullata, Dentaria heterophylla, D. laciniata, Dentaria Canadensis, Matelladiophylla, Arabis trifolia, Okenia scutellifolia. Visited the spot where I planted my specimens of Trillium grandiflorum.

April 21  
(continued)

and found 4 plants, one in full bloom, one in bud, and two sterile. Amelanchier is in full bloom, found two, some fine Anemone nemorosa on banks of Deep Run.

To-day has been the warmest this season 80°. It was rather humid and towards five o'clock we had a thunder storm. It then cleared, but about 7.30 it began to shower. Arrived home about 9 o'clock.

836

24 A trip with G. along the Gunpowder. We met at P. about 8.20 A.M. On Sunday there was a marked fall in the temperature which continued during Monday with high winds. To-day, I hoped it would become warmer and when I left home there seemed to be great chances of this occurring. But on arriving at P. the wind began to blow and as it continued to do so we lost all hope of a warm day. It continued to blow until in the afternoon, when wind subsided and the day became almost perfect. We took the Dulany Valley Pike; met again the same old Lickman fixing the pike. While talking with him Col. 's daughter passed us on horseback, riding astride. We took the road leading past the old still house, on way collecting Erythronium and Diastema. At the old house we stopped to lunch. After dinner continued our trip to Maryman's Mill's bridge. Here we learned how to cross the country to Poplar "Will" Church and then get on the road to Phoenix. Arrived at P. we proceeded to Carroll Mill. This was the end of our journey and we now started homeward. It was then 5.30 P.M. We started back to P. then proceeded along the railroad tracks back to Texas. This part of our trip was enjoyed very much - the beautiful sunset and that most beautiful of all views looking up Western Run. I had hoped to reach C. in time for the 6.35 P.M. train but we missed it, and it was for this reason that we continued onward to P. where we took the train to Mt. W. and here took the car home.

Collected to-day specimens of 3 kinds of stamens of Erythronium and put in killing fluid. I was surprised when I put the small yellow anthered stamens in fluid to see them (the anthers

elongate to twice their original size. I must study this further.

- 837 27 With Botany class from Shirley Lane to Hampden. The trip was a most enjoyable one. When we passed the Equisetum hiemale spot, I secured specimens for experimentation. These were cut in various lengths consisting of one two, three & four nodes, then placed in glass of water some with base and others with apex in water. (v. p. 261)

- 838 28 With teachers, women's college, etc to Magalloway River, stopping on way at North Point to inspect Fort Howard.

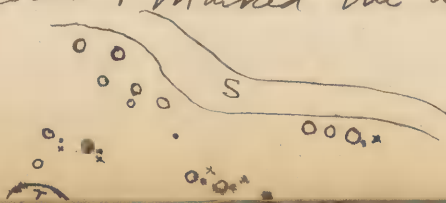
It was about 3 P. M. when we reached Cape Sable. A tramp through the region revealed little of botanical interest. Still we found that quite rare & interesting Schweinitzia odorata. We also found Opuntia vulgaris. Epigaea repens, Cypripedium acaule, and Linaria Canadensis were very much in evidence.

It was about 4 P. M. when we were on the point of leaving that a large fire in the woods was observed. We at once set to work to put out the flames and after an hour's work finally succeeded. It was 9 P. M. before we arrived home.

- 839 May 1 Left wharf at foot of William St. for Stony Creek at 6:30 A. M. It was almost 9:30 when we arrived at Head of Creek.

To-day, I walked along the shore to the head of the creek to the rivulet, then walked along it. I kept along it until I came to its apparent head; when I found myself in large field with road only a short distance away.

Seeing that at edge of field was some pretty woods and that woods was running parallel with road, I decided to walk along through it. At a point almost even with the little cemetery, I descended the hillside, and found myself on rivulet running to head of creek. As I approached the stream found Thalictrum Oleraceum in abundance and here too I found Helonia bullata. At one spot I found 5 specimens in bloom. Marked the tree & made following sketch



\* Plants in bloom

T Tree.

S Stream.

May 1  
(continued)

Ate my lunch close to spot where I found first *Helonias*. After dinner proceeded to road and then to Mt. Rd and finally to old homestead where I secured apple blossoms. Proceeded then to Waterford and to the pond. Here I planted two roots of the *Calla palustris*, planted two too, at *Helonias* locality, marking the spot by cutting a place in <sup>one of</sup> 3 trees growing together also the little Holly. Have my doubts about any of them growing as they have dried out considerably. Proceeded now to railroad and then to Glenburnie. Found *Iris versicolor* in full bloom; also found *Hypoxis erecta*, *Lupinus perennis*.

- 840 3 With Section B. of Botany class from W. Arlington to Liberty Rd. We met at Grandland Av. Proceeded onto this avenue to the woods then followed the road through the woods. The road we took is just a short distance north? of Grandland Av. It led to a pretty little settlement in a rather swampy situation. We proceeded around it finally coming to the fence of the retreat of Mt. Hope. Miss S. found *Princed Lantana* along the far bank of the stream found here. We continued along path until we reached Liberty Rd, then proceeded to Bayview Oak Junction where we took the car for home. We found *Anemone nemorosa*, *Obolonia*, *Geranium*, *Urtica*, *Oxalis*, *Polemonium*, *Orchis spectabilis*.
- 841 4 With Section B. to Woodbrook. We found *Trillium cernuum*, *Calla palustris* (just done blooming), *Marianthemum* (just beginning), *Viola canina*, *Lupinus perennis*.
- 842 5 With members of the Botany Section of the Md. Acad. of Sciences to Glenburnie. We left Camden Station on the 8.40 A.M. train. Our intention was to go to Marley but finding that no "Fishermen" tickets were for sale we decided to go to G. From G. we walked to M. a distance of about 2 miles. The day was very warm and our trip was not the pleasantest. Arrived at M. we proceeded first of all ate lunch, then proceeded to Forest Home. Here we visited the *Lygodium* spot and then continued our trip to the *Helonias* locality. We found H. just about at <sup>the</sup> end of its blooming period. I proceeded to the marked locality (s. 164)

and found the following. Two plants only were



found in bloom. After making sketch of same we decided to return. Just as we reached F. H. we were overtaken by a thunder-storm. We stopped at the old homestead, but as the rain did not abate we decided to proceed to station where we awaited the 5.10 P. M. train. Found to-day more than 40 plants in bloom. The most conspicuous, etc., being *Iris versuta*, *Polygonum verticillatum*, *Helianthus bellus*, *Cypripedium acaule*, *Hypoxis creata*, *Lupinus perennans*, *Azalea nudicaulis*, *Oxalis*.

843

6 A trip with Walter & Percy from Bonnie Bee to Franklin Road. I made the trip mainly to find *Cypripedium pubescens* in bloom and to get specimens of *Equisetum arvense*. This latter I did find in the moist spot close to bend of road where the little swamp is. Red bud and Dogwood are in full bloom. Found also *C. pubescens*, *Urtica*, *Asimina triloba*, *Viburnum dentatum*, *Azalea*, *Pedicularis*, *Urtica*, *Cardamine*, *Podophyllum*.

Equisetum hiemale Waters (v. 4.27.06) To-day is the 9th day since the beginning of experiment. Note the following:- There were 7 with one node, of this number 4 shipped and lay floating in water or 3 remained upright. These 3 had apex of stem in water. all three had started to sprout, one having 2 shoots and other two each one shoot.

Nodes: 2,	3,	4,	5.
B. in water 1, 3 <sup>xx</sup>	0, 3, 0 <sup>+</sup> 1, 2, 1 2, 1, 2 1, 2, 1	3, 1, 2, 2 0, 2, 1, 2	0, 1, 1, 1, 2
A. in water 3, 0 2, 1	1, 2, 0 0, 1, 2 0, 0, 3	0, 3, 1, 3	0, 0, 0, 2, 1

x upper joint dying. xx number show no. of shoots at each joint — show which shoots were strongest.

844

- May 8 From the Canon through the ravine to Down Rd then to Falls Rd and Mt. Washington. Took this route to-day to see how the violets planted last year were progressing, I failed, however, for some reason or other to locate the plants I had to collect Dogwood blossoms, these are now in all their glory. I found the plant all along the route and had I known this I ~~if~~ would not have collected them so early in the day. Found Calthe still in bloom. Cash Apple is just beginning. Most interesting observation to-day were those on Trillium cernuum. I was surprised to find 2 stalks from the same root-stock in a number of places, in one case I even found 3. I see no mention of this fact either in Esay or in B. & B.. Observed too, that some of the Dogtooth Violets - Erythronium Americanum were sending out their peculiar above ground shoots. It seems that the young plants alone do this, at any rate, they start this before any of the others. On way home to-day, proceeded to Down Road. I went this way to see Dippingpond Run. I believe this run well worth visiting. On my way home observed a very large Tulip tree, it had a trunk fully 5 ft. in diameter. It was on Uleman's place.
- 9 This is the 12<sup>th</sup> day since placing the Equisetum in water. I note the following:—

N. 1.	2.	3.	4.	5.
B. 1. 3 <sub>r</sub>	0. 3. 0	3. 1. 2. 2 <sub>r</sub>	0. 1. 1. 1. 2 <sub>r</sub>	
	1. 2. 1 <sub>r</sub>	0. 2. 1. 2. 2 <sub>r</sub>		
	2. 1. 2 <sub>r</sub>			
	1. 2. 1 <sub>r</sub>			
A. 2 <sub>r</sub>	3. 0	1. 2. 0	0. 3. 1. 3 <sub>r</sub>	0. 0. 0. 2 <sub>r</sub> 1 <sub>r</sub>
1	2. 1 <sub>r</sub>	0. 1. 2 <sub>r</sub>		
		1. 0. 3 <sub>r</sub>		

The -<sub>r</sub> shows which once show root growth. Those with \* show root growth of considerable extent.

Observed that whereas 3 days ago the shoots projected either either upward (B) or downward (A), I observe now that those of A, are curving upward. The roots of all are extending downward.

845 10

With Section B. of botany class to Roland Park. We took the trip through Bonapartes(?) woods. We proceeded out Roland Ave to the street beyond the school house. Here in a garden we found a

beautiful Ach in bloom. We proceeded down this street to the woods. At a point a short distance from the car line we entered and proceeded in a direction parallel with the road. Found on the way very much Oxalis spectabilis, also what I believe is Vincetoxicum nigrum. At one place we crossed a narrow field, then entered the woods again. Here we found some of the prettiest of O. spectabilis, also much Viola pedata; we finally came to a road which brought us out at the car barn. Here too near an old pond we found Vincetoxicum. The trip was enjoyed very much.

846 11 From Dickeyville to Gayman Oak Junction, with Section A. of the Botany class. Polemonium was found and best of all Phlox pilosa. Triostema perfoliatum is in bud.

847 12. Left home 6.15 A. M. so as to reach Luther ville in time to take the 7.59 A. M. train for Cochyville. Arrived at Co. at about 8.10 A. M.; proceeded then along railroad to Sparks. Near Oakland I found quite a number of fine plants of the Sclerophyll or Oyster-plant - Tragopogon porifolius. Here too, I secured some nice specimens of Barbarea vulgaris both stricta and arvensis. Along the river I found Osmanthus Claytoniana in fine condition, here too was much Viola canina. Along the river beyond Phoenix I found Cerastium Pennsylvanicum in great profusion and a short distance beyond Ranunculus of which I collected about 200 specimens. Nothing interesting was now obtained until near Sparks where I found a nice colony of Hepidium Draba. At S., I crossed the river and then <sup>retained</sup> proceeded along the right bank. It was now about 11 o'clock so I found a pretty nook and ate my lunch. All about me were Erythronium. I observed that it was only those whose bulbs were near the surface, that is 2 or 3 inches below that produced those runners. I pulled up a number and found in nearly every instance 3 shoots, sometimes only one of these shoots reached the surface, sometimes 2 and occasionally all three. Sometimes, the shoot, while wholly

May 12  
(continued)

below had already a small bulb at the tip. Whenever a shoot came above ground the part exposed became <sup>slightly</sup> green. In no case were three runners produced on the 2-leaved fringed plants. While on this subject, I might add that later when near the road opposite Phoenix I came upon a patch of these plants still in full bloom, all had small anthers. After dinner I proceeded on my trip. Immediately opposite the quarry I found a solitary plant of Cypripedium parviflorum. Nothing new of note was observed until I came to a point opposite Carroll Branch. Here I found the Ostrich Fern in the greatest profusion. Several hundred of these stately ferns were here found, stretching from the river across the alluvial soil to the hillside and up it a short distance. I noted that those growing on the hillside were quite small compared to those in the alluvial soil. As an experiment, I cut the fronds off several, some 4 or 5 near the south end and two or three near the tree; all were marked by sinking a stick into the soil. I now continued my trip but before long made another discovery. On the hillside grew a nice colony of Hydrastis Canadensis. Here too near a large rock grew Trillium cernuum. Rocks beautifully decorated with Columbine were seen in several places.

Arrived at the road opposite P. I proceeded up it, finally reaching York Rd. Proceeded then to Marble Hill and the Oregon Rd. Crossed through Oregon, the Sheween and finally reached Big Spring, now only a mud hole. From Big Spring I picked my way to Elynden where I took the car for home. Arrived home about 9 P.M.

Notes on the Equisetum ride 4.27.06.

No. 1	2	3	4	5
B	1. 3 <sub>r</sub>	0. 3. 0 1. 2. 1 <sub>r</sub> 2. 1. 2 <sub>r</sub> 1. 2. 1 <sub>r</sub> <sub>s</sub>	3. 1. 2. 2 <sub>r</sub> -s <sub>r</sub> 0. 2. 1. 2 <sub>r</sub> -s <sub>r</sub>	0. 1. 1. 1. 2 <sub>r</sub> -s <sub>r</sub>
A	2 <sub>r</sub> 1 <sub>r</sub> 1 <sub>r</sub>	3. 0 2. 1 <sub>r</sub> 1. 2. 0 -s <sub>r</sub> 2. 1. 2 <sub>r</sub> 1. 0. 3 <sub>r</sub>	1. 3. 1. 3 <sub>r</sub> -s <sub>r</sub>	0. 2. 0. 2. 1 <sub>r</sub> -s <sub>r</sub> -s <sub>r</sub>

-s means that shoot has developed and is no longer at standstill.

-s<sub>r</sub> means that shoot is curving upwards.

One thing I forgot to mention and that is the effect of the frost upon the young foliage, the damage to which has been considerable. The following trees, etc., were observed affected:—  
Most of all *Liriodendron*; *Fraxinus*; *Platanus*; *Juglans* (both species) very much so; *Sassafras* - *Pinus* Oak; *Virginia Creeper*; *Daphne*; *Spice Bush*; *Honey-suckle*. There seemed to be no regular order about this, so far as I was able to observe.

The dead foliage, drying and withering, sent out a delightful odor. It was something like drying hay and yet sweeter.

848 13 With N. and children along Guyan Falls from Warden North Rd to Dickeyville, following the Mill-race.

*Paulownia* is now in full bloom.

849 15 From Towson to Hampden, thence to Providence to Loch Raven, to Glen Ellen and back to Towson. Left home about 9 A.M. reaching P. about 10.10 A.M., I proceeded at once towards Hampden. My intentions were to proceed over an old route but seeing a workman, I questioned him regarding the path I should take. He advised me to cross the field and take the path through the woods. At first, I felt inclined to go the route I had ~~at~~ intended, especially so, as I wished to see the *Polygonia verticillata*, but finally decided to go as directed. After crossing the field I came to a path in the woods. This I followed; it led through the woods.

After a short walk I came to a stream. Here I found *Veratrum viride* in profusion. After crossing the stream the path follows one of the tributaries a short distance. All along this stream it looked interesting so followed it. Soon came to a spot with the greatest profusion of *Veratrum* and here I found *Eggenetia sylvestris*. This is quite a find but unfortunately there were but 3 plants to be found. I picked the spot very carefully. The spot may be found from path by turning in at the marked beech. Here too I found *Polygonia verticillata*. Continued my trip along path, and finally reached the lane passing the school house, and soon Providence Rd. I now continued

May 15 (continued) out the road to the orchard near which I turn in towards the ravine. My trip here was undertaken just at proper time for I undertook it to find Aetaea alba in bloom. This plant was found in the greatest profusion and in full bloom. The blossoms have a delightful fragrance. Here, too, I found Orchis spectabilis in profusion. Two very large specimens were secured for the press. After leaving the ravine, I proceeded to the water-trough for a drink then continued my way toward Glen Ellen. Just at the 3-arched bridge I secured some fine specimens of Ranunculus for close work. On way home passed the E. hyemale place. Observed new canes coming up. Took home 4 canes for experiment.

Notes on Equisetum

There is very little change except in length of growth of parts.

850 17 With Section B. to Back River. We proceeded as far as the Aralia spinosa place then turned in and proceeded as far as the river. Fine specimens of Polygonum verticillate and Gypripedium acule were observed. Robinia just beginning to bloom

851 18 With Section A. to Herring Run. Secured some Chama in fruit. A large Magnolia was observed in a garden on our way homeward. Could not say whether it is M. macrophylla or M. Fraseri. Robinia at bridge on Haford Rd

852 19 To the spot where I planted H. orbiculata last year (v. 6.10.05) I went over the same route in going to the spot. In car met one of our former students, now teaching at Rockville Mr. Nelson. Kept a sharp lookout for Robinia which is now in full bloom, along with Wild Cherry and the Fringe Tree. Just beyond the Edmondson Ar. bridge, hundreds of trees are to be found. also many where cars turn from the road. In fact found it in many places during day; so much along Jones turn Rd and so much along Liberty Rd. It was nearly 10 o'clock when I reached Alburtan. Here I found in moist ground near the railroad tracks R. ceptentrionalis in great profusion. On road to A. found R. bulbosus too in quantity. At A. I observed that the railroad company was making great improvements - a large open cut, then a stretch

along the river, then a trail, all on the north bank of the river. What was my surprise, to find, that when it did come again on opposite side of stream, it was right at the spot where I had planted the *Habenaria*. I searched the hillside, hoping that it may possibly be safe, but in the general turn-up condition failed to find it. Here I found a shady nook & ate my lunch. After dinner proceeded to switch to granite, crossed the river and then to the quarry. There were well worth a visit. Large blocks of granite, <sup>of exceptionally fine quality</sup> are here quarried, the smaller fragments are broken into smaller pieces & finally trimmed into Belgian blocks. I understand that \$22.50 a 1000 is the price paid the men; \$3 a day is <sup>about</sup> the price paid on the average a day. From Granite I went to Herndon then to Liberty Rd and home. Near Randallstown & also near Rockdale I found beautiful large patches of that pretty double *Ranunculus* (v. p. 191.). I had hoped to go to the North Br. of Patuxent but it grew too late and I will be obliged to try this trip later. It is not quite so warm as it was yesterday (94°) and the day before (91°). Reached home about 8.30 P.M.

853

- 21 To Edmondson Av. especially near Bonnie Bree for twigs of *Locust*. Already it is almost done flowering, showing that if wanted for close study it must be used within the week from time when first observed in flower. Found *Ornithogallum umbellatum* in great profusion in full bloom on north side of ~~the~~ road.

854

- 22 To Hampstead and Kiwano. Left home promptly at 6.30 A.M. so as to be able to get the 6 A.M. car for Emory Lane. No car being in sight, I walked up to Charles & Kensington Sts, saw, however, that had I waited for the Fort An. car I would have been able to get there in time. Arrived at E. G. at 7.35 A.M. and set out at once for Woodensburg where I arrived at about 8.10 A.M. the time when train was there due. To do this meant walking

May 22, very fast. The train, however, was nearly 10 min. late. Arrived at H. I  
 (continued) walked out the railroad tracks to overhead bridge. Here I was met by  
 Raymond Leicester, who kindly took me to the road leading to Mr. G's  
 place. Reached Mr. G's before 9 A.M. Met both Mr & Mrs G.  
 a short distance from home mending a fence. Mr. G. recognized me  
 at once & both gave me a kind welcome and urged me to remain  
 at home before starting out; I promised, however, to try to call before  
 starting homeward. I found the Painted Cup in all its glory,  
 as was also the Saxifraga Pennsylvanica. I was very sorry to see  
 that some of the ground had been ploughed and that a man was there  
 building a stable. After securing a number of fine specimens  
 and walking over the swamp I proceeded to the spring where I  
 ate my lunch. A beautiful Senecio was very abundant, but I  
 have not yet determined species. After dinner I went to see the  
 man working & learned that he owned the land & that he would  
 probably plough up the spot where grew the pretty Painted Cup  
 next year after building his house in the spring. Walked up the road  
 over a short distance then returned to G's. whom I induced to  
 dig up a few of the plants & place upon his place. I now decided  
 to start back for H. going by way of the mill. Arrived at H. I set  
 out for C. G. going along the tracks. Arrived at C. G. in time to take  
 the 6 P.M. car for home.

23 Botany Section Meeting. Mrs B. brought specimen of Jack-in-Pulpit  
 with two spathes one opposite the other. Miss S. told of  
 finding a plant with two apices.

855 24 With Section B. to Bonnie Brae thence to Dickysville,  
 found a specimen of Cypripedium parviflorum. This trip is entirely too  
 long; it was nearly 9 P.M. before I reached home.

856 25 With Section A. to Brooklyn. A visit to the fern region.  
 The following ferns were found. Osmunda cinnamomea, O. regalis,  
Dicksonia, Aspidium Monobosum, A. Thelypteris, Osmunda sensibilis,  
Woodwardia, Asplenium filix-foemina, A. ciliatum. Eurygonia and  
Leclactum were both found in flower. Observed the close super-  
 ficial resemblance of Dittany to Houstonia missouriensis. The resem-  
 blance is so close that I mistook the former for the latter.

If the two plants are together there is not so much danger of mistaking them but when separate one is likely ~~too~~ <sup>to</sup> be examined. The dittany, of course, has the well-known odor and if plant is buried it is recognized at once. This of course, applies when plants are not in bloom.

- 857 26 With Section of Botany of the Academy to Glenburnie. We went in the afternoon, leaving Camden Station on the 1.30 P. M. train. Arrived at G. we proceeded towards Saw Mill Branch then along it to the pond. Ferns were in all their glory. Kalmia angustifolia in full bloom; K. latifolia almost so; Viburnum cassinoides. Ilex, Saururus, Amianthum nemorosum, Magnolia. At the pond we examined the Marilia which is spreading everywhere.

After a little rest at the dam we returned to the station and returned home on the 6.28 P. M. train.

- 858 27 With Walter & Percy from Dickeyville to Swynn Oak Junction. I hoped to get specimens of the Christmas fern but failed to find it in quantity; one specimen only was found. The rain during past night and morning has freshened things up wonderfully. Found Acletois quadripetala and Lobelia spicata in bloom.

859. 28 To Franklin Rd for Christmas Fern. I found a nice lot of it near the quarry. Scutellaria serrata and Spirea Aruncus are in bloom. Here, too, may be found much Viburnum acerifolium. All day rain.

- 860 30 Decoration Day. To the ravine. My intention <sup>was</sup> ~~was~~ to visit the Equisetum hyemale locality and observe progress of my experiments (v. April 10, 1906); but for some reason or other I missed the place. I, therefore, walked over to Fox Run, and visited two spots where I had planted Ostrich Fern and also Calla palustris (v. April 21, 06). At first place Ostrich Fern looked poor, but Calla looked fine. At second place, Ostrich Fern

May 30  
(continued)

looked pretty fair. At first place the fern had been attacked by a worm (caterpillar, I suppose), no doubt the same kind that generally attacked our ferns. When near the entrance of the ravine I visited the Asplenium lanceolatum, it is growing finely. After leaving the ravine I proceeded to Orange Grove, crossed the river and then went along River Rd. Arrived at place where I had planted a rootstock of Cella, I visited the spot and found the plant doing well. Here too I collected some Marchantia polymorpha. I had hoped to collect some Barbarea for High School but I found it passed blooming almost everywhere. At bridge only did I find a small number of the plants. Buttercups are still to be had along River Rd and also along road to St Denis. It may be well to keep this in mind and collect Barbarea earlier next year, and let Buttercups come later. Walked home by way of B. & O. I found the pretty Vicia in bloom. The new black system will soon be in operation, already parts of it are in working order.

861 31 To West Arlington. Our trip was to be along Cleveland Av. then through woods to Liberty Rd. But the thunderstorm prevented the carrying out of this program. Daisies in full bloom.

June 1<sup>1862</sup> To Mt. Wm. We met at terminus of Columbia Av. car about 3 P.M. proceeded to pond then to woods at head of the pond. On way passed the "English Oak". In woods found specimens of Arum nudicaule and Helianthemum Canadense. Returning to station we proceeded to Westport by way of pretty path through the woods.

863 2 To Swan Creek. The most interesting find of the day was a species of water turtle, quite black on back and red disk on under side. The creature cannot shut up its shell. Two were observed, the largest was over 6 inches long. Mr. Hancock tells me that they become quite large 18 inches to 2 feet. He says they are called chelys. Having secured specimens of Bladderwort and of Anacharis I started homeward proceeding by way of path through the woods. This led me to a major road but as it continued on other side of road, I followed it and found that it led to river close to Hawkins Point. Chimaphila, Lin. varicolor, Nymphaea odorata are in full bloom.

864

5  
#

Along Beaver Dam Creek. Left home at 6 A.M., reached  
 Town 7 o'clock and G. at about 7.35. The train arrived  
 at about 8 o'clock and we reached C. about 8.10. I took the  
 route across the fields, reaching the stream at the old  
 dairy house. Here is a fine spring gushing out of the side  
 of the hill. A nice path here leads up into the ravine a  
 short distance. This I followed, crossing the stream just above  
 the place where it crossed. I now proceeded along the  
 stream quite a distance, some distance beyond the clearing.  
 But notwithstanding the distance, nothing of particular  
 interest was observed. Kalina alone, which was in full  
 bloom alone gladdened the eye. This lack of flowers  
 and the heat, made the trip most uninteresting. I now  
 crossed the stream and descended on right bank. For some  
 time, it was again nothing of interest. Finally, however,  
 I came to some beautiful rocks covered with ferns and  
 liverworts. One particularly high rock was very pretty. Here  
 I found 2 forked fronds of Polypodium vulgare. This  
 beautiful spot is located between two large thickets of Kalina.  
 Just before came to first almost impenetrable thicket I found  
 a beautiful patch of Lycopodium complanatum which  
 showed a fructed portion. I marked the spot by blazing  
 3 trees. It is a short distance up the hillside. Just where  
 the rocks are, I found Magnolia tripetala still in bloom  
 although in its last stage. Here too, I found a nice patch  
 of Tuckermans, also Chamaedorea, and Lycopodium obscurum.  
 In this one particular spot I could have remained all day, but  
 it was late and I did not begin. The second thicket of Kalina  
 was possibly worse to get through than the first. Finally  
 got through and was then soon at spring. Hasted then  
 onward to station which I reached in time to take the  
 5.35 P.M. train. Reached G. about 5 minutes before  
 6 P.M. On way back to Town, it began to rain, but  
 as it did not rain very hard did not get very wet, arrived  
 home about 7.30 P.M.

865

June 7 To West Arlington. From Cleveland Ar. to Liberty Rd.  
A nice patch of Phlox maculata was found, also some fine  
specimens of Lupinus hirsutus. The peculiar plants near end of  
trip were still not in bloom. I cannot imagine what they can  
be. Strawberry (wild) were found frequently.

866

8 Mt Carmel Rd. This trip proved quite interesting. We got  
off at path at foot of hill just beyond Bay View. This path  
leads through an old cemetery; when we reached the road we  
went east and entered an open & stretch of wood land just  
beyond an old hotel. Hoary Pen, Stylocanthus, Azalea mucronata,  
Andromeda mucronata, A. hyemalis, Mitchella, etc etc, were found.

867

9 A trip to-day to Fresh Pond. The boat left at 6 A. M. so I  
got to the head of Rock Creek at 8.30 A. M. and by 10 A. M. I  
was close to the pond. I say close to the pond for I had some  
trouble locating it but before long I found the spot. I made the  
trip hoping to find Anthriscus but in this I was disappointed.  
Cranberries were in full bloom. After visiting the pond I pro-  
ceeded along the right bank of its outlet to the second pond.  
On trip found Polygonum amphibium also Smilax.

Due to the excessive humidity the trip was most unsatisfac-  
tory and I started on the return trip long before I should other-  
wise have done. When I finally reached the Mt Rd. I decided  
to go to Stony Creek and go home on the Petrel as this boat would  
bring me home an hour earlier. Just beyond the road to Rock Creek,  
the one from Mayathy, on left side of road, I found Fumaria  
in great profusion. Reached Stony Creek some time before the  
boat arrived; but was glad to meet here an old school-mate  
Dr. Mansfield. On way home we had a thunder storm, but the  
little steamer went through it quite bravely. Reached home about  
8. P. M.

868

12 From Cockeysville to the Gunpowder then to Western Run and  
back to C. I took my usual route and reached C. about 8.10 A. M.  
The morning was delightful. I even found that I could have  
avoided an old field by taking the road which crosses the rail-  
road above Oakland. The beauty of this trip really began after passing

this road. The entire trip along the river is fine and one no doubt very profitable in early spring, as it was nothing new was found. Some very picturesque spots were passed. Just where Western Run unites with the Gunpowder, I found several plants of *Arisaema Dracontium*. The best find of the day was made while going along W. R. quite close to the spring I found a beautifully forked Christmas Fern. Reached C. early enough to take the 4.35 P. M. train. On way back to P. I found the Rhynchospora (v p. 200)

- 869 14 With Botany Class through woods near Arlington Junction. We followed the car tracks for a short distance then turned into a path on the right. This path led up hill a short distance but then branched. We took the left fork. This will make a fine trip in the fall.
- 870 15 To Curtis Bay. We took the usual route. I was pleased to find Fox Bet in full bloom also Wild Lonicera.
- 871 16 On the Delight to Chain Woods. In the little hollow we found Sparanium in full bloom. The day was a most delightful one. Reached home about 7 P. M.
- 872 21 With botany class to the ravine. We met at Catonsville terminus about 3 P. M. Our route was down Wilton Av. then through the woods to the ravine, following Fox Run. There was much to be seen along the route and we stopped frequently. One fine specimen of Lilium Philadelphicum was found. It took us two hours to reach the river. It was now our intention to go to the Observatory. Distant thundering, however, caused us to deliberate, whether it might not be wiser to go to Orange Grove and seek protection from the rain, should there be any. However, we started up the hill, but before we were half way, we decided to descend again and go to O. G. This was wise for we were not long under shelter, when it began to rain and rain in torrents. The question now arose, how best to go home. Several decided to take the train going to Baltimore, <sup>which just then arrived,</sup> but as it

June 21  
(continued)

was vertibuled, and they had not crossed the tracks before it arrived, it meant going completely around the train to get on. Before they could do this the train started, and they were compelled to return to the station. I now observed that ~~there~~<sup>it</sup> was raining only lightly so I decided to go up the track for a hat box by one of the members. I had ~~gotten~~<sup>gone</sup> but a short distance when a west-bound train arrived. Some wished to await my return, but finally all boarded the train and proceeded to E. C. where they took the electric car for home. I found the hat, returned to the station, then with young Kauter, who awaited my return proceeded up Hilton Av. to Catonsville where we took the car for home.

- 873 22 With section A. along Guyan Falls. To-day as also yesterday, I collected pods of Acarus Canadensis. Notwithstanding the numerous flowers, very little fruit is matured. The fruit is a dry capsule bursting loculicidally when fully mature. Each cell may contain from one to six seeds and sometimes 7. A number of capsules were examined and found to contain the following numbers of seed:— 19, 23, 14, 9, 31, 6. The average number of seeds per cell being 3 or 4. They are somewhat pear-shaped, flattened, however, on one side, along which is broad caruncle extending from apex of seed to a short distance around the base. When moist this swells up considerably and no doubt assists materially in discriminating the seed. They are of a chestnut brown color nearly the size of apple seeds. The capsule in bursting, splits first along the suture extending between the calyx lobes, which gradually curves back towards the pedicel (stalk) breaking away from the inner wall of the ovary. Later the suture covered by the calyx lobes also splits. They all split from apex to base and as they split the seeds are forced out.

- 874 23 To Boyds Pond and vicinity. Left home on steamer Rock Creek at 6 A. M. for Fairview. Arrived there, I covered the country reaching Boyds Pond about 11 A. M. I then visited Buddin Creek, Back Creek, returning to head of Stony Run. I had some difficulty at first to pick out my way, but finally got on right road passing Harry Cook's fine home. Boyds Pond now belongs to Perry Calvert. The pond did not prove as interesting as I had hoped, nothing new was found. Throughout this region were a great many fish-hawk nests. The lack of Sphagnum was quite marked.

characteristic, not only was none to be found at the pond but also none at the creek. Blackberries & raspberries were found everywhere. Raspberries of a beautiful salmon-white color were gotten on the Mt. Rd before coming to Danmar. Arrived at head of creek a little past 4 P.M. While there decided to examine the plants of Hanthus. In a lot of 200 specimens <sup>2%</sup> 4 were found with 2 plants arising from one seed. A number of the others were dug up and the berries carefully examined, in no case was the remaining seed found sound. My investigation was interrupted by the approach of a thunder storm. I sought shelter under a tree but was finally compelled to go up the bluff. The old lady of the house, seeing me asked me in and I accepted gladly the invitation. It soon poured down. Fortunately just as the boat reached the wharf it ceased raining and I got aboard perfectly dry. It began to rain though again but ceased completely before our arrival in the city. At Altoona a crowd of about 20 men employees of Steam Boat, clothed boarded the boat. They had had an outing 3 empty <sup>kegs</sup> and one almost so choked to one extent they had enjoyed themselves. The latter keg was brought aboard, and although asked not to drink any <sup>of the beer</sup> ~~thing~~ it being against the rules, they finally convinced the purser that it was all right and he allowed them to empty the keg. Not only allowed them, but the engineer and another hand helped to empty it.

875 27

Along Herring Run from Philadelphia Rd to Eastern Av. The entire trip was quite interesting, but nothing of particular note was observed until near the mouth of Herring Run. Here grows immense areas of Celastrum. From this point onward the trip too was more interesting. Along the railroad a fine patch of Typha latifolia was found. It is now in bloom and coming into bloom, it is 10 days later than T. angustifolia in coming into bloom. Later, we found the latter but it was hard to find a spike still in bloom. We took the car at Hollywood for home.

876

June 30 With Mr. Allen through the ravine. We met at Batonville terminus about 8.30 A.M. We took the route down Hilton Ave to path leading along Fox Run and then along the latter to the ravine. The day was hot and we were glad when we entered the shade of the woods. I visited the Equisetum hiemale locality and observed the progress of my experiment (v. 4.10.06). I failed to find any Ostrich Fern and the specimen of Equisetum near the tree was dead. But an examination of the 8 specimens was more encouraging, 7 of these were growing, also one of the specimens lying flat. We now continued our trip. Just where the path crosses Fox Run we found a convenient camp and here we stopped an hour or more to rest and chat. Mr. A. explained again how to bud and how to graft. Grafting must be done in early spring before growth takes place and then the graft is fastened with grafting wax. Budding must be done in June or latter part of August. The buds are taken off of last year's young wood and put on one year or 2 year wood. The time in June is between 15<sup>th</sup> & 25<sup>th</sup> and time in Aug. from 12<sup>th</sup> to end and even to Sept. 10<sup>th</sup>, but Aug. is better. Here, too, we ate our lunch. After dinner we proceeded through the ravine to the river. I examined numerous patches of Acarum for prints but failed to find any. Going home we took the route by way of the Observatory. Mushrooms of all kinds were found everywhere. Several pods of Utricularia perfoliata were cut open. The delusiveness is loculicidal 2 or 3 seeds are found in each cell. In the 3 capsules opened the following numbers of seeds were found, 7, 8 & 3. The seeds are quite large and have growing from one side quite a prominent caruncle, the outgrowth grows out from each side of a prominent ridge, or it may perhaps be better described as a large fluffy bag like growth attached to both sides of this ridge. This bag like outgrowth is fully as large as the seed but is empty and is squeezed tightly against the seed. The embryo is apparently quite close to this ridge and is small. The greater part of the seed is in fact the bulk of the seed being endosperm. We reached C. about 5 P.M. & home by 6 P.M.

877.  
July.

- 3 With Mr. A. to Rock Creek and vicinity, returning by way of Stony Creek. The day was partly cloudy and sultry. Just as we landed at the head of the creek, we had a little shower, which, however, did not last very long. To-day, I decided, instead of taking the usual route, the one best taking, when going to French Pond, to take the road leading past the store and across the creek. After going a short distance almost directly across the neck of land between the two creeks it joined the neck road. Here on both sides of the road, numerous *Juniperus Virginica* were growing. From the bark of one of the trees, I collected some specimens of a peculiar reddish lichen. Here, too, I collected a specimen of *Rubus cuneifolius*. Not far from the school-house, we found some *Rhus toxicodendron* with true oak leaves, causing Mr. A. to say "at last, I see why it was called Poison Oak".

At the school house we ate our lunch. When we reached the Mt. Rd, it was my intention to go to Magrath Bridge, but this would have necessitated our going out the road. I, therefore decided to go onward, and spend a little of our time on the "Old Mill Road". In the pine woods, on the left we found *Monotropa Hypopitys* in great profusion. At Dammann's, we stopped to examine the leaves of *Populus monilifera* (?) at any rate, that is what I think it is; I observed that at the base of the leaf blade, just where it joins the petiole, in fact just where it branches forming the veins of the leaf, on the upper surface, were from 2 to 4 little glands (?). This particular tree was infested very much by numerous galls. On side of house, were several trees of *P. grandidentata*. The <sup>old</sup> leaves of this species were generally free of the glands, only occasionally one or two just beyond those last formed, were found with quite large black (?) glands. We proceeded out the old mill road as far as the old ruin. Here in the garden we found a plum tree, quite laden down with fruit. We now decided to go back & then to the wharf where we had quite a shower, which soaked us almost completely notwithstanding its short duration. While it was raining,

\* I fail to find a description of this plant.

July 3  
(continued)

I secured a pretty specimen of Cetraria from one of the old limbs of a pine tree. It stopped raining almost as suddenly as it began. On my way back to D's, I secured a number of Cladonia. We reached the wharf sometime ahead of the boat. While waiting we had another little shower & we sought shelter at Mrs Sharpe's. We remained here, seated on the porch until the arrival of the boat. As soon as boat landed we boarded it, and soon after had a heavy downpour. From this time there was almost a continual down pour until we reached the city. Arrived home about 8 P. M. The boat leaves head of creek at 6 P. M. now, week-days.

878 7

Along the Gunpowder from Mendith Bridge to Western Run then along it to Oakland. It was 9 A. M. when I reached Fowson, and started out Dulany Valley Pike to Mendith Bridge. The day was delightful so walking was a pleasure. From Dulany Valley Road to Maryman Bridge I took the road passing the old still house. My first plant of interest was observed when on this road just a short distance beyond the pike. Here on the left side of the road was growing a peculiar-looking grass. It had a straggling habit and I might have passed it, had not the flower attracted my attention; the spikes, at first appearance, seemed to me very much like those of Agropyrum but instead of being erect and appressed to rachis were deflexed. When I reached the river, I visited the Erythronium specimen, but nothing was observed, all traces of these plants have disappeared. While here looked for seedlings of Arenaria but found none; found, however, a few seedlings of Lindera Benzoin, and observed that the germinations were hypogaeous.

Although not yet noon, stopped at the spring to lunch. I was surprised to find the old still house now roofed.

It was a few minutes past 12 o'clock when I reached the bridge and began my trip along the stream. On the way to Wren found a great many plants of Cerinthe Maritima, so secured leaves of this plant for full class. My best find of the day was made when close to W. Here I found a large rock almost completely covered with a species of Umbilicaria (?). There were specimens of all sizes, some quite large. Many of them had other

lichens growing upon them. I secured a number for my herbarium. It took me one hour to get to Wawan.

My next find was made a short distance beyond W. here on a rock was a fine specimen of Isaarium columbinum. Here, too, grew many fine specimens of Mazowiei tripetala. Another nice find was made when quite near the Western Run here at the foot of a Birch tree <sup>was</sup> growing a pretty white Hydnium. At first I thought it was a Polyzoon for it was growing very much like so many species of this fungus. I cut off a number of pieces. These had very much the appearance of pieces of cod-fish and I must say very much their odor. While going along this part of my trip I was at one place met by a most delightful odor. I recognized it at once as the sweet odor of the fragrant Polyzoon and such it proved to be.

The trip up to the run took exactly  $2\frac{1}{2}$  hrs. From the river up to Ashland and then to Cockeysville took almost the same length of time. At Ashland I found a nice spring.

879. 14 With Walter & Percy from Dickysville to Swynn Oak Park. We took the usual route. Looked for the Sparganium at the little pond near the ice house, but there we no plants of it found. We reached S. O. in time to observe the performance. Left for home at about 6.30 P. M.

880 21 To Stoney Creek and the Mayothy. Arrived at the head of Stoney Creek, I proceeded to Mt. Rd and from thence along the Old Mill Rd. The day being hot & sultry, it was more a day for lounging, so my rate of progress was <sup>not</sup> very rapid. I entered the woods on my right and here for some time revelled in Lichens. On the ground were immense patches of Cl. rhytisma, but in among them were many other species. One beautiful little one with pretty red apothecia and which I take to be Cl. cristata <sup>tella</sup> was quite common. Here too, I found a pretty patch which I failed to recognize. It reminded me somewhat of Cl. squamosa but I do not think it is that species. On the trees I found some

July 21  
(continued)

fine specimens of Cetraria also another one beautifully printed, but which I did not recognize. Here, too, I had a chance to observe the peculiar manner of growth of Lecanobryum. The new growth is radial, when patch is taken up it has the appearance as if rooted only in the center. It was here too, that I found a single specimen of Microtylis ophioglossoides. This was quite a surprise.

After eating my lunch, I proceeded to the old ruin, but found that I was still too early for the plumbe. Continued onward now to the old mill. Deliberated here for some time whether I should go onward down the road to one of the branches of the Mayotte, finally decided to go. I had no trouble at all reaching the tributary and found it was worth the trip. Just as I reached my destination we had a down pour of rain, and this prevented further exploration. I returned again to Waterford and then back to the creek. On way collected some puff-balls on the edge of field just below the old ruin and also some at the head of the creek.

881

28 With Percy along B. & O. to A. & B. S. & L (old) then by way of old road to Carroll Park and thence home. We stopped at old spring north of Washington Rd & found it in bad condition. While going through the wood picked up two hepatics one no doubt Scapania nemorea. Wild Churns are now getting ripe. Found some rough puff-balls, same kind as found at Stony Run, on hillside at intersection of the 2 railroad's.

882  
Aug.

7

With George & Ed. from Ticonderoga to the Gunpowder, thence a short distance beyond Warren; returning we went back to W. and then by way of Warren Rd etc to Texas. The day was another of the long series of disagreeable days, that we have had this summer, making tramping anything but a source of pleasure. First the long stretch of road until we reached the river, in the hot sunshine with hardly a breath of air. This exhausted us to such an extent that

\* A study of this a few days later makes me feel inclined to believe it, as well as the other found in trees, species of Collema.

281

there was little pleasure even after we reached the woods. My intention was to go as far as Western Run and then to Cockysville; but we found the task too much. A short distance below Warren we came to a fallen tree just beyond a little rivulet. The view up stream being particularly fine, Geo. took a picture of it. While he was thus engaged I examined the fallen tree on which were some fine colonies of Prallania Eboracensis. Another peculiar growth attracted my attention, but failing to recognize it, I took some along for study, it looked very much as if it was a hepatic. I examined the rocky little precipice over which the little streamlet was flowing, here on the <sup>almost</sup> perpendicular face of rock were some fine colonies of Peltigera (P. canina, I think). The picture taken, we continued onward, and our next stop, or better my next stop, was to examine the Umbilicaria Dillenii. I hoped to find fructified specimens but was unsuccessful. Specimens upon which smaller specimens of the same species were to be found were observed, and I collected a nice specimen showing this. Cladonia sylvestris? or some closely allied form, was very abundant covering the rocky soil; but although anxious to study it, I did not care to collect any of the shrivelled up specimens, deeming it wiser to put this off to some ~~moister~~ rainy day. We passed W. and proceeded to a point beyond the curve in the river where Geo. took another picture. Here, on the rocks I found another specimen somewhat similar to my unknown find on the tree. Here, however, I felt more inclined to believe it a lichen. It reminded me too, of somewhat similar specimen found near Cockysville. <sup>white</sup> On our return to Warren, I collected some fine specimen of Peltigera aphthosa. Arrived at W., we intended first to go to Cockysville but being informed by one of the residents that it was just as close to go to Texas we decided to go to the latter place. A little farther on asking again our directions to go to Texas we were told to take the path across the field as it would save a long stretch. We took the path and with the exception of one difficult place near the bottom of the field where owing to the moisture the ~~path~~ was hard to make out and then again when we reached the terminus and

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we found ourselves practically enclosed, we had little trouble. On the way observed a tree on which were growing Stictis pulmonaria. We reached Texas in time to take the 5.30 train. We took tickets to Mt. W. Just as we reached Mt. W. it began to rain, but my big umbrella was large enough to shelter all three, so we got to the car all right. Is was at the old still house that we ate our dinner, and here we now observed why the old place had been patched up; it was the temporary home of a few workmen who were cutting out the tulip trees, "poplars" as they called them. When cut down, specimens of all sizes, from big trees down to small ones 4 inches in diameter, they were barked and split up into cord wood, this was then shipped away for the manufacture of paper. Cutting cannot go on much longer for then the bark no longer slips. Some large trunks are also sent with bark. An interesting feature of the day was a young dog which followed us from Towson.

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18 Through the ravine beyond "The Caves". It was 10 A.M. when I started up the lane towards St. Thomas's Church. It was partly cloudy and the temperature was fairly pleasant. Quite close to the old church yard I observed a number of trees with lichens; one of them in particular had finely printed specimens. This gray-brown lichen has always interested me, but it is generally sterile. I believe it a species of Parmelia. From the church I proceeded over the route I usually take, past the blacksmith, and to the corduroy road near the stream. On the way out the road I collected a nice bit of a sterile Cladonia, notwithstanding its well-developed podetia and primary thallus. And then on a tree near by on left side of road I found a fine specimen of either a Parmelia or Cetraria. While on this part of my trip there was a light shower, very light indeed, for it was more of a drizzle. While collecting the Cladonia, I observed that I had a slight headache; this soon became quite annoying and spoiled to a great extent what would otherwise have proven an ideal day. My next finds were made along the corduroy road; here I found more than 24 plants of Micortypha ophioglossoides. These were found, too, without any special effort being made in looking them

up. I proceeded to the spring, and here I ate my lunch. After dinner, I continued my trip keeping on <sup>right</sup> side of the stream. My trip now was one of a series of pleasant excursions and had my head only felt right, I would have enjoyed it most thoroughly. First of all I collected some specimens of that pretty lichen in *Kalmia latifolia*; I hoped to find some in fruit but none was found. Next on a fallen tree trunk, one with whitish bark and looking very much like the trunk of *Juglans cinerea* I found several fine specimens of lichen. First of all, a pretty one looking very much like a species of *Peltigera*, but quite fine for a species of this genus; then there were species of *Leptogium* and *Collema*. My next finds were on another fallen tree trunk, much larger than the first; here too were species of *Leptogium* and then a very pretty crustose form beautifully fringed. On the rocks that I passed, nearly all dripping with moisture were species of *Peltigera* and *Collema*. Just below the dam on a large rock in the stream were some fine specimens of a large *Collema*.

After leaving the ravine I proceeded over the usual route to the electric car at near Pikeville.

Besides lichens, numerous fungi were also observed; one beautiful old-rose (lavender like) colored *Clavaria* was observed; also a pretty agaric with filices clothed with fuzz; then too a peculiar fungus growth on *Kalmia*.

- 884 19 Along the river with P. & W. Found a patch of 3 plants of *Aschepia* ——— which instead of having flowers in clusters had them in 2's
- 885 29 Magalloway River. We (W. & I.) in round bottom boat made a trip up the west side of Gibem Is. We made frequent landings and I made note of the various plants observed. When we came opposite Cushman Wharf we rowed across and got our bearings. We then rowed to the bar connecting the island with the mainland. We then rowed along the shore of the mainland, entering Cornfield Cr. we learned where there was a fine spring. Here was quite a fine collecting ground and I secured a nice lichen. We next rowed across the creek and entered the woods. Here lichens were quite plentiful and I secured some nice ones from off an old decaying tree, also one from a rock on the shore. We now rowed

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out of the creek and again keeping along the shore made a landing at an old Indian camp. Nothing of interest was however found here. Our next landing was made a short distance beyond this woods in a continuation of that visited opposite the spring. Here I secured some fine lichens a particularly fine one a Cladonia with brilliant red apothecia. We now made a flying visit to Sister Island, then one to the Dutch Ship Island. We then made our way back to the boat.

- 886 30 Mayothe River. Another visit to the woods on Cornfield Cr., securing another nice lot of lichens, one with red apothecia very similar to the one collected yesterday, only this one grows almost exclusively upon decaying logs. To-day instead of W. I had R. <sup>Kochy</sup> for a companion. After visiting the woods we proceeded at once towards the shore back of Sister Island ~~not~~ to a point where trip ceased yesterday. We then kept along the shore making frequent landing. Nothing of particular interest was observed until we reached the bluff, another ancient village site. Here we found several very large patches of Corallorhiza multiflora. After eating our lunch, we continued our trip until we reached a point opposite Fished Cr. We then crossed the river and entered the creek making a landing at the head of left fork; here I found two Cladonias that appeared somewhat different from any previously collected. We now left the creek and keeping along the shore proceeded towards Duff Cr. Nothing more of interest was observed.

887.  
Sept. 1

A trip to Furnace Cr. and from there to Waterford and then to the head of Stony Cr. Rode to B. then walked. My first stop was at the blacksmiths where I chatted for at least 1/2 hr. Next stopped at the spring to see if there were any fox grapes but found none. Proceeded then to the old furnace. On way found some nice lichens on red maple trunk. At old furnace collected a few grapes. Here too, ate my lunch. The tide being low I crossed Timber Creek and proceeded to the road. Here I was given a ride, first by a negro then by Mr. Neidard who took me all the way to the old mill. I now proceeded to the old ruin. Here I secured some apples, also observed a fine chestnut tree in the rear of the old hut.

laden with fruit. On trunk of this tree are a number of lichens collected a fine *Parmelia* in fruit. Proceeded down through the woods. Found *Hygdonium complanatum* in fruit, although still in green condition. Secured from the trees several lichen all from dead limbs of the pines. Most of the specimens were those of *Cetraria*; I wished to get the two species *ciliata* and *laevigata*. Finding that it was 4.15 P.M. I decided to hurry onward to the boat landing, which I reached at 4.15 P.M. After a wait of nearly 40 minutes the boat arrived. Reached home a little before 8 P.M.

The weather to-day has been perfect, quite a contrast to that of last week.

